```
Sequence 2, Appli
Sequence 2, Appli
Sequence 204, Appli
Sequence 116, Appl
Sequence 110, Appl
Sequence 117, Appl
Sequence 117, Appl
Sequence 174, Appl
                                                                                                         8, 2006, 21:08:16; Search time 169 Seconds (without alignments) 205.206 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Description
                                                                                                                                                                                                          444
1 MKGWGWLALLIGALLGTAWA.....QSVVEVTVTVPPNKVAHSGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Published Applications AA Main:*

(cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*

(cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*

(cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep:*

(cgn2_6/ptodata/1/pubpaa/US108_PUBCOMB.pep:*

(cgn2_6/ptodata/1/pubpaa/US108_PUBCOMB.pep:*

(cgn2_6/ptodata/1/pubpaa/US108_PUBCOMB.pep:*
GenCore version 5.1.8
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-082-502-2
US-10-716-32-36-2
US-10-716-32-36-2
US-09-978-360A-716
US-10-319-763-204
US-10-319-763-110
US-10-319-763-110
US-10-1319-763-1174
US-10-121-049-174
US-10-121-049-174
US-10-175-746-174
US-10-173-262-174
                                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                        1867569 segs, 417829326 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                       protein search, using sw model
                                                                                                                                                                                                                                                                BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                 seq length: 0
seq length: 200000000
                                                                                                                                                                                    US-10-716-824-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0
100.0
100.0
92.5
83.1
83.1
83.1
                                                                                                             Мау
                                                                                                                                                                                      Title:
Perfect score:
                                                                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                444
410.5
369
369
369
369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        369
369
369
369
369
369
369
                                                                                                                                                                                                                                                                                                                                                                                                   Minimum DB
Maximum DB
                                                                         protein
                                                                                                                                                                                                                              Seguence:
                                                                                                                                                                                                                                                                                                                        Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Database
                                                                                                             Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ĕ
```

Sequence 174, App	O,	Length 83; Indels 0; Gaps 0; WELAQVDPKKTIQMGSFRINP 60	0
US-10-123-236-174 US-10-123-236-174 US-10-140-928-174 US-10-121-045-174 US-10-123-292-174 US-10-123-903-174 US-10-124-812-174 US-10-124-819-174 US-10-124-819-174 US-10-124-824-174 US-10-127-825A-174 US-10-127-825A-174 US-10-127-835A-174 US-10-127-835A-174 US-10-127-835A-174 US-10-127-835A-174 US-10-127-8139A-174 US-10-127-8139A-174 US-10-127-8139A-174	ALIGNMENTS 2502 Secretory Protein - /10/082,502 19,028 09,808 89,899 85,983 51,704	100.0%; Score 444; DB 4; Length 83; Conservative 0; Mismatches 0; Indels MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTI	etory Protein -
33333333333333333333333333333333333333	102-502-2 nnce 2, Application US/10082502 cation No. US20030171542A1 LCAMT: Sheppard, Paul O. LGANT: Sheppard, Laura J. LGANT: Galinek, Laura J. LGANT: Harborn US/10082, REPERENCE: 97-11C2 ENT APPLICATION: Mammalian Secretor STLING DATE: 2001-10-19 RAPPLICATION NUMBER: 09/318,028 RAPPLICATION NUMBER: 09/318,028 RAPLICATION NUMBER: 09/109,808 RETLING DATE: 1998-07-02 RAPPLICATION NUMBER: 60/085,983 RETLING DATE: 1998-06-17 RAPPLICATION NUMBER: 60/085,983 RETLING DATE: 1998-07-02 RAPPLICATION NUMBER: 60/085,983 RETLING DATE: 1998-06-17 RAPPLICATION NUMBER: 60/085,983 RETLING DATE: 1998-07-02 RETLING DATE: 1998-07-02 RETLING DATE: 1998-07-03 RETLING DATE: 1998-06-17 RAPPLICATION NUMBER: 60/085,983 RETLING DATE: 1998-06-17 RETLING DATE: 1998-07-03 RETLING DATE: 1998-06-17 RETLING DATE: 1998-06-	imilarity 100.0%; Scientiarity 100.0%; Pr. ; Conservative 0; MKGWGWLALLIGALLGTAWARRS	1-824-2 te 2, Application US/1071 tion No. US20040110927A1 . INFORMATION: .ANT: Sheppard, Paul O. .ANT: Jelinek, Laura J. OF INVENTION: Mammalian
4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		Query Match Best Local Similarity Matches 83; Conserv 1 MKGWGWLALI 1	2 716 encencies LICE LICE LICE
	RESULT US-10-1 Seque Publ. Publ. APPI APPI APPI APPI APPI APPI APPI APP	Oy Mar Oy Oy	RESULT US-10- ; Sequ ; Publ ; Publ ; ARP

```
; LOCATION: -20..-1
US-09-978-360A-716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 5
US-10-319-763-204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                       엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MKGWGWLALLILGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 100.0%; Score 444; DB 5; Length 83; Best Local Similarity 100.0%; Pred. No. 1.1e-44; Matches 83; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 444; DB 4; Length 83; 100.0%; Pred. No. 1.1e-44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-932-3/6-2

Sequence 2, Application US/10932376

Fublication No. US20050124801A1

GENERAL INFORMATION:

APPLICANT: Jelinek, Laura J.

TITLE OF INVENTION: Mammalian Secretory Protein - 9

FILE REPERENCE: 97-102

CURRENT APPLICATION NUMBER: US/10/932,376

CURRENT APPLICATION NUMBER: US/10/932,376

CURRENT APPLICATION NUMBER: US/10/932,376

PRIOR APPLICATION NUMBER: US/10/932,98

PRIOR PILING DATE: 2001-10-19

PRIOR PILING DATE: 1999-05-25

PRIOR APPLICATION NUMBER: 09/109,808

PRIOR FILING DATE: 1999-07-02

PRIOR APPLICATION NUMBER: 60/089,899

PRIOR PILING DATE: 1998-06-17

PRIOR PILING DATE: 1998-05-19

PRIOR PILING DATE: 1998-06-17

PRIOR PILING DATE: 1998-06-17

PRIOR PILING DATE: 1998-06-17

PRIOR PILING DATE: 1098-06-17

PRIOR PILING DATE: 1098-06-17

PRIOR PILING DATE: 1098-06-17

SOFTWARE: FaetSEQ for Windows Version 3.0

SEC ID NOS: 24

TEMPORATOR 10 NOS: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
CURRENT PELICATION NUMBER: US/10/716,824

CURRENT FILING DATE: 2003-11-19

PRIOR APPLICATION NUMBER: US/10/082,502

PRIOR FILING DATE: 2001-10-19

PRIOR FILING DATE: 1999-05-25

PRIOR PELING DATE: 1999-06-25

PRIOR PILING DATE: 1998-06-17

PRIOR FILING DATE: 1998-06-17

PRIOR FILING DATE: 1998-06-17

PRIOR FILING DATE: 1998-06-17

PRIOR PILING DATE: 1998-06-17

PRIOR PILING DATE: 1998-06-17

PRIOR PILING DATE: 1998-05-19

PRIOR APPLICATION NUMBER: 60/085,983

PRIOR PILING DATE: 1998-05-19

PRIOR PILING DATE: 1998-05-19

PRIOR FILING DATE: 1998-05-19

PRIOR FILING DATE: 1998-05-19

PRIOR FILING DATE: 1997-07-03

NUMBER OF SEQ ID NOS: 24

NUMBER OF SEQ ID NOS: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 DGSQSVVEVTVTVPPNKVAHSGF 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 DGSQSVVEVTVTVPPNKVAHSGF 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             83; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: PRT
ORGANISM: Homo sapiens
US-10-716-824-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-932-376-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-932-376-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠ
```

1 MXGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP 60

```
APPLICANT: Engwards, Jean-Baptiste Dumas willie
APPLICANT: Duclert, Aymeric
APPLICANT: Duclert, Aymeric
APPLICANT: Duclert, Aymeric
APPLICANT: Duclert, Severin
APPLICANT: Obsert, Severin
APPLICANT: Clusel, Catherine
TITLE OF INVENTION: Complementary DNA's Encoding Proteins with Signal Peptides
TITLE OF INVENTION: Complementary DNA's Encoding Proteins with Signal Peptides
TITLE OF INVENTION NUMBER: US/09/978,360A
FRIOR APPLICATION NUMBER: US 60/066,677
PRIOR PILING DATE: 1997-12-13
PRIOR APPLICATION NUMBER: US 60/069,957
PRIOR PILING DATE: 1998-04-13
PRIOR APPLICATION NUMBER: US 60/096,116
PRIOR PILING DATE: 1998-04-13
PRIOR PILING DATE: 1998-04-13
PRIOR PILING DATE: 1998-04-13
PRIOR PILING DATE: 1998-12-17
PRIOR APPLICATION NUMBER: US 60/099,273
PRIOR APPLICATION NUMBER: US 60/099,273
PRIOR PILING DATE: 1998-12-17
PRIOR APPLICATION NUMBER: US 09/191,997
PRIOR PILING DATE: 1998-12-17
PRIOR PILING DATE: P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP 60
1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 444, DB 3; Length 84; ilarity 100.0%; Pred. No. 1.1e-44; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 716, Application US/09978360A Publication VO. US20040110939A1 SERERAL INFORMATION APPLICANT: Edwards, Jean-Baptiste Dumas Milne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Dumas Milne Edwards, Jean-Baptiste; APPLICANT: Duclert, Aymeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DGSQSVVEVTVTVPPNKVAHSGF 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 DGSQSVVEVTVTVPPNKVAHSGF 83
                                                                                                61 DGSQSVVEVTVTVPPNKVAHSGF 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; Sequence 204, Application US/10319763
; Publication No. US20030144490A1
; GENERAL INFORMATION:
                                                                                                                                                          61 DGSQSVVEVTVTVPPNKVAHSGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 83; Conserv
```

```
LOCATION: -20..-1
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: UNSURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-978-360A-717
                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-319-763-110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-319-763-110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 qq
                                                                                                                                                                                        a
                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MKGWGWLALLIGAALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MKGWGWLALLIGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 444; DB 4; Length 84; larity 100.0%; Pred. No. 1.1e-44; Conservative 0; Mismatches 0; Indels
APPLICANT: Bougueleret, Lydie
FILE REFERENCE: G-031.USO4.DIV
CURRENT APPLICATION NUMBER: US/10/319,763
CURRENT FILING DATE: 2002-12-10
PRIOR APPLICATION NUMBER: 60/066,677
PRIOR PLICATION NUMBER: 60/069,957
PRIOR APPLICATION NUMBER: 60/069,957
PRIOR APPLICATION NUMBER: 60/069,957
PRIOR APPLICATION NUMBER: 60/074,121
PRIOR APPLICATION NUMBER: 60/074,121
PRIOR APPLICATION NUMBER: 60/081,563
PRIOR PLIING DATE: 1998-04-13
PRIOR PLIING DATE: 1998-04-13
PRIOR PLIING DATE: 1998-09-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: 36 Human Secreted Proteins
TITLE OF INVENTION NUMBER: US/10/632,983
CURRENT FILING DATE: 2003-08-04
PRIOR APPLICATION NUMBER: PCT/US99/03939
PRIOR FILING DATE: 1998-02-26
PRIOR FILING DATE: 1998-02-26
PRIOR FILING DATE: 1998-02-26
PRIOR PRILING DATE: 1998-02-26
PRIOR FILING DATE: 1998-02-26
PRIOR PRILING DATE: 1998-02-26
PRIOR FILING DATE: 1998-02-26
PRIOR PRILING DATE: 1998-02-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 63, Application US/10632983; Publication No. US20040067518A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DGSQSVVEVTVTVPPNKVAHSGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; TYPE: PRT
; ORGANISM: Homo sapiens
US,10-632-983-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 83; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; LOCATION: -20..-1
US-10-319-763-204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY: SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JS-10-632-983-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ. ID NO 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠ
```

```
1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MKGWGWLALLLGGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MKGWGWLALLLGALLGTAWARRSRDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP 60
                                                                                                            1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 97;
Query Match 100.0%; Score 444; DB 4; Length 84; Best Local Similarity 100.0%; Pred. No. 1.1e-44; Matches 83; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANT: Dumas Milne Edwards, Jean-Baptiste
APPLICANT: Dumas Milne Edwards, Jean-Baptiste
APPLICANT: Dumas Milne Edwards, Jean-Baptiste
APPLICANT: Duclert, Aymeric
FURLE OF INVENTION: EXTENDED CONAS FOR SECRETED PROTEINS
FILE REFERENCE: G. 031.0804.DIV
CURRENT APPLICATION NUMBER: US/10/319,763
CURRENT FILING DATE: 1997-11-13
PRIOR APPLICATION NUMBER: 60/066,677
PRIOR FILING DATE: 1997-11-17
PRIOR APPLICATION NUMBER: 60/074,121
PRIOR FILING DATE: 1998-02-09
PRIOR FILING DATE: 1998-02-09
PRIOR FILING DATE: 1998-03-10
PRIOR FILING DATE: 1998-04-13
PRIOR FILING DATE: 1998-09-04
PRIOR FILING DATE: 1998-09-04
SEQ ID NO 110
BRIOR FILING DATE: 1998-09-04
SOFTWARE: PALENT.
ILBRICHT: DATE: 1998-09-04
SOFTWARE: PALENT.
ILBRICHT: PALENT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OTHER INFORMATION: Xaa = any one of the twenty amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        92.5%; Score 410.5; DB 4;
94.0%; Pred. No. 1.2e-40;
tive 1; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 717, Application US/09978360A
Publication No. US20040110939A1
GENERAL INFORMATION:
APPLICANT: Edwards, Jean-Baptiste Dumas Milne
APPLICANT: Bougueleret, Aymeric
APPLICANT: Bougueleret, Lydie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 DGSQSVVEVTVTV-PPNKVAHSGF 83
                                                                                                                                                                                                                         83
                                                                                                                                                                                                                                               61 DGSQSVVEVTVPPNKVAHSGF 83
                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 110, Application US/10319763
Publication No. US20030144490A1
GENERAL INFORMATION:
                                                                                                                                                                                                                         61 DGSQSVVEVTVTVPPNKVAHSGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 94.0%
The 79; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: PRT
ORGANISM: Homo sapiens
```

```
CURRENT APPLICATION NUMBER: US/10/028,072
CURRENT FILING DATE: 2001-12-19
PRIOR PLILING DATE: 1997-06-18
PRIOR FILING DATE: 1997-06-18
PRIOR FILING DATE: 1997-08-26
PRIOR FILING DATE: 1997-09-17
PRIOR FILING DATE: 1997-09-17
PRIOR FILING DATE: 1997-09-17
PRIOR APPLICATION NUMBER: 60/059113
PRIOR FILING DATE: 1997-09-17
                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: 60/059352
PRIOR FILING DATE: 1997-09-19
PRIOR PELLING DATE: 1997-09-19
PRIOR APPLICATION NUMBER: 60/05988
PRIOR APPLICATION NUMBER: 60/059836
PRIOR PILING DATE: 1997-09-24
PRIOR PILING DATE: 1997-10-17
PRIOR PILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NR FILING DATE: 1997-10-17

R APPLICATION NUMBER: 60/064248

R FILING DATE: 1997-11-03

R FILING DATE: 1997-11-03

R FILING DATE: 1997-11-07

R APPLICATION NUMBER: 60/065186

R FILING DATE: 1997-11-12

R APPLICATION NUMBER: 60/065846

R FILING DATE: 1997-11-17

R APPLICATION NUMBER: 60/065846

R FILING DATE: 1997-11-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PILING DATE: 1997-10-17
APPLICATION NUMBER: 60/062285
FILING DATE: 1997-10-17
APPLICATION NUMBER: 60/062287
FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1997-10-24
APPLICATION NUMBER: 60/063327
FILING DATE: 1997-10-27
APPLICATION NUMBER: 60/063329
FILING DATE: 1997-10-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1997-11-21
APPLICATION NUMBER: 60/066453
FILING DATE: 1997-11-24
APPLICATION NUMBER: 60/066511
                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/059184
FILING DATE: 1997-09-17
APPLICATION NUMBER: 60/059263
FILING DATE: 1997-09-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1997-10-24
APPLICATION NUMBER: 60/062082
PILING DATE: 1997-10-31
APPLICATION NUMBER: 60/063127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/063550
FILING DATE: 1997-10-28
APPLICATION NUMBER: 60/063561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1997-10-29
APPLICATION NUMBER: 60/063733
APPLICATION NUMBER: 60/063735
APPLICATION NUMBER: 60/063735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1997-10-29
APPLICATION UNMBER: 60/063738
FILING DATE: 1997-10-29
APPLICATION NUMBER: 60/063755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/062814
FILING DATE: 1997-10-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/062816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1997-10-24
APPLICATION NUMBER: 60/063045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1997-10-28
APPLICATION NUMBER: 60/063704
1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MKGWGWLALILGGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 83.1%; Score 369; DB 3; Length 182; 100.0%; Pred. No. 2.2e-35; ive 0; Mismatches 0; Indel8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 174, Application US/10028072 Publication No. US20030004311A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Baresini, Maureen APPLICANT: Beresini, Maureen APPLICANT: Beresini, Maureen APPLICANT: Despoyers, Luc APPLICANT: Gapnoyers, Luc APPLICANT: Gao, Wei-Qiang APPLICANT: Gerritsen, Mary E. APPLICANT: Godowski, Paul J. APPLICANT: Gudowski, Paul J. APPLICANT: Gurney, Augtin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Smith, Victoria
Stewart, Timothy A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tumas, Daniel
Watanabe, Colin K
Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sherwood, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity 100.
Matches 69; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 DGSQSVVEV 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DGSQSVVEV 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; NAME/KEY: SIGNAL
; LOCATION: -20..-1
US-09-978-360A-717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 9
US-10-028-072-174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
```

ઠે

```
R APPLICATION NUMBER: 60/066770
R FILING DATE: 1997-11-24
R FILING DATE: 1997-11-24
R FILING DATE: 1997-11-11
R APPLICATION NUMBER: 60/069212
R FILING DATE: 1997-12-11
R APPLICATION NUMBER: 60/06934
R FILING DATE: 1997-12-11
R APPLICATION NUMBER: 60/069694
R FILING DATE: 1997-12-16
R APPLICATION NUMBER: 60/069694
R FILING DATE: 1997-12-16
R APPLICATION NUMBER: 60/07320
R FILING DATE: 1998-01-23
R APPLICATION NUMBER: 60/073612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R FILING DATE: 1998-04-14

R FILING DATE: 1998-04-15

R FILING DATE: 1998-04-15

R APPLICATION NUMBER: 60/081818

R APPLICATION NUMBER: 60/081818

R APPLICATION NUMBER: 60/08299

R FILING DATE: 1998-04-24

R APPLICATION NUMBER: 60/08332

R FILING DATE: 1998-04-28

R FILING DATE: 1998-04-29

R FILING DATE: 1998-04-29

R FILING DATE: 1998-04-29

R FILING DATE: 1998-04-29

R FILING DATE: 1998-05-07

R PILING DATE: 1998-05-07

R FILING DATE: 1998-05-07

R FILING DATE: 1998-05-07

R FILING DATE: 1998-05-07

R APPLICATION NUMBER: 60/086149

R FILING DATE: 1998-05-13

R FILING DATE: 1998-05-13

R APPLICATION NUMBER: 60/085339

R FILING DATE: 1998-05-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R FILING DATE: 1998-02-09
R PLING DATE: 1998-02-09
R FILING DATE: 1998-02-09
R APPLICATION NUMBER: 60/077791
R PILING DATE: 1998-03-12
R APPLICATION NUMBER: 60/078910
R RELIGHTON NUMBER: 60/078910
R FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R APPLICATION NUMBER: 60/081203
R FILING DATE: 1998-04-09
APPLICATION NUMBER: 60/081229
R FILING DATE: 1998-04-09
R APPLICATION NUMBER: 60/081695
R FILING DATE: 1998-04-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R APPLICATION NUMBER: 60/085579
R FILING DATE: 1998-05-15
A PPLICATION NUMBER: 60/085697
R FILING DATE: 1998-05-15
R APPLICATION NUMBER: 60/085704
R FILING DATE: 1998-05-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-05-22
APPLICATION NUMBER: 60/086430
FILING DATE: 1998-05-22
APPLICATION NUMBER: 60/087106
FILING DATE: 1998-05-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/079728
FILING DATE: 1998-03-27
APPLICATION NUMBER: 60/080165
FILING DATE: 1998-03-31
                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-02-04
APPLICATION NUMBER: 60/074086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/079663
FILING DATE: 1998-02-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    :CATION NUMBER: 60/079294
FILING DATE: 1997-11-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-03-2
                                                                    PRIOR PRIOR
```

1 MKGWGWLALLIGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP 60 1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP ; 0 Length 182; 83.1%; Score 369; DB 4; I larity 100.0%; Pred. No. 2.2e-35; Conservative 0; Mismatches 0; PRIOR APPLICATION NUMBER: 60/088026
PRIOR PILING DATE: 1998-06-04
PRIOR PILING DATE: 1998-06-10
PRIOR PILING DATE: 1998-06-10
PRIOR PILING DATE: 1998-06-10
PRIOR PILING DATE: 1998-06-10
PRIOR PELING DATE: 1998-06-10
PRIOR APPLICATION NUMBER: 60/08810
PRIOR PILING DATE: 1998-06-11
PRIOR APPLICATION NUMBER: 60/08953
PRIOR PILING DATE: 1998-06-17
PRIOR APPLICATION NUMBER: 60/08959
PRIOR PILING DATE: 1998-06-17
PRIOR PILING DATE: 1998-06-17
PRIOR PILING DATE: 1998-06-17
PRIOR PILING DATE: 1998-06-19
PRIOR PILING DATE: 1998-06-19
PRIOR PILING DATE: 1998-06-19
PRIOR PILING DATE: 1998-06-24
PRIOR PILING DATE: 1998-06-26
PRIOR PILING DATE: 1998-07-01
PRIOR PILING DATE: 1998-07-01 Sequence 174, Application US/10140808 Publication No. US20030017563A1 GENERAL INFORMATION: PRIOR FILING DATE: 1998-07-02 PRIOR APPLICATION NUMBER: 60/091982 PRIOR FILING DATE: 1998-07-07 APPLICANT: Baker, Kevin P.
APPLICANT: Beresini, Maureen
APPLICANT: DeForge, Laura 69 61 DGŚQŚWEW 69 Query Match Best Local Similarity Matches 69; Conserv 61 DGSQSVVEV US-10-140-808-174 g à à

9

APPLICANT: Zhang, Zemin TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3330R1C182 Gao, Wei-Oiang Gerritsen, Mary E. Goddard, Audrey Godowski, Paul J. Gurney, Austin I. Sherwood, Steven Smith, Victoria Stewart, Timothy A. Watanabe, Colin K Wood, William Desnoyers, Luc Filvaroff, Ellen Tumas, Daniel APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT: APPLICANT: APPLICANT: APPLICANT: APPLICANT: APPLICANT: APPLICANT APPLICANT APPLICANT

9

```
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                             1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE; P3330R.IC)
CURRENT APPLICATION NUMBER: US/10/121,049
CURRENT FILING DATE: 2002-04-12
                                                                                                                                                                                                                                                                                                    1 MKGWGWLALLLGALLGTAWARRSODLHCGACRALVDELEWEIAQVDFKKTIQMGSFRINP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                83.1%; Score 369; DB 4; Length 182; 100.0%; Pred. No. 2.2e-35; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
83.1%; Score 369; DB 4; Length 182;
Best Local Similarity 100.0%; Pred. No. 2.2e-35;
Matches 69; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Prior Application removed - See File Wrapper or Palm NUMBER OF SEQ ID NOS: 550
SEQ ID NO 174
LENGTH: 182
CURRENT APPLICATION NUMBER: US/10/140,808
CURRENT FILING DATE: 2002-05-07
Prior Apploication removed - See File Wrapper or Palm NUMBER OF SEQ 1D NOS: SSO
LENGTH: 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 174, Application US/10121049
Publication No. US20030022239A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Desnoyers, Luc
Filvaroff, Ellen
Gao, Wei-Qiang
Gerritsen, Mary E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Stewart, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tumas, Daniel
Watanabe, Colin K
Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Beresini, Maureen
Deforge, Laura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Goddard, Audrey
Godowski, Paul J.
Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sherwood, Steven
                                                                                                                                                                                                                                     Best Local Similarity 100.
Matches 69; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 DGSQSVVEV 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 DGSQSVVEV 69
                                                                                                                                                                                                                                                                                                                                                                                  61 DGSQSVVEV 69
                                                                                                                                                                                                                                                                                                                                                                                                                      DGSQSVVEV 69
                                                                                                                                    TYPE: PRT
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-121-049-174
                                                                                                                                                                            US-10-140-808-174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-121-049-174
                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT
                                                                                                                                                                                                                                                                                                                                        원
                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                    ઠે
```

RESULT 12 US-10-123-904-174

```
1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDFKKTIQMGSFRINP 60
                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3330R1C54
CURRENT APPLICATION NUMBER: US/10/123,904
CURRENT FILING DATE: 2002-04-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P333001C160
CURRENT APPLICATION NUMBER: US/10/140,470
CURRENT FILING DATE: 2002-05-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gapв
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          83.1%; Score 369; DB 4; Length 182;
100.0%; Pred. No. 2.2e-35;
tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Prior Application removed - See File Wrapper or Palm NUMBER OF SEQ ID NOS: 550 SEQ ID NO 174 LENGTH: 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 174, Application US/10140470 Publication No. US20030022331A1 GENERAL INFORMATION:
Application US/10123904
5. US20030022328A1
                                                                                                                                                                                                                                                                                                                 Smith, Victoria
Stewart, Timothy A.
Tumas, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Stewart, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                  Watanabe, Colin K
Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Goddard, Audrey
                                                                                                                                                                              Gao, Wei-Qiang
Gerritsen, Mary E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Watanabe, Colin K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Beresini, Maureen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Godowski, Paul J.
Gurney, Austin L.
Sherwood, Steven
                                                                                                                                                                                                                          Goddard, Audrey
Godowski, Paul J.
                                                                                                                                                                                                                                                                  Gurney, Austin L. Sherwood, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Desnoyers, Luc
Filvaroff, Ellen
                                                                                                                                  Desnoyers, Luc
Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 100.4
Matches 69; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DeForge, Laura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gao, Wei-Qiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tumas, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 DGSQSVVEV 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DGSQSVVEV 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; ORGANISM: Homo Sapien
US-10-123-904-174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-140-470-174
                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
```

- See Palm or File Wrapper

```
APPLICANT:
APPLICANT:
                                                                                                                                                   APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                    ö
                                                                                                                                                                                                                    1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MKGMGWLALLIGALLGALGTAWARRSQDLHCGACRALVDELEWEIAQVDFKKTIQMGSFRINP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE, P333041C353
CURRENT APPLICATION NUMBER: 10/10/175,746
CURRENT FILING DATE: 2002-06-19
                                                                                                                                                                    Gaps
                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               83.1%; Score 369; DB 4; Length 182; 100.0%; Pred. No. 2.2e-35; tive 0; Mismatches 0; Indels
                                                                                                                                   Length 182;
                                                                                                                                83.1%; Score 369; DB 4; Length 18
100.0%; Pred. No. 2.2e-35;
tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Prior Application removed - See File Wrapper or Palm NUMBER OF SEQ ID NOS: 550 SEQ ID NO 174
                                                                                                                                                                                                                                                                                                                                                                                 ; Sequence 174, Application US/10175746; Publication No. US20030027270A1
GENERAL INFORMATION: APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Desnoyers, Luc
Filvaroff, Ellen
Gao, Wei-Qiang
Gerritsen, Mary E.
Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Stewart, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tumas, Daniel
Watanabe, Colin K
Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Beresini, Maureen
DePorge, Laura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Godowski, Paul J.
Gurney, Austin L.
Sherwood, Steven
                                                                                                                                                                  69; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 83.1
Best Local Similarity 100.
Matches 69; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Smith, Victoria
Prior Application removed
NUMBER OF SEQ ID NOS: 550
SEQ ID NO 174
                                                                                                                                                                                                                                                                  61 DGSQSVVEV 69
                                                                                                                                                                                                                                                                                        DGSQSVVEV 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DGSQSVVEV 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DGSOSVVEV 69
                                                                  ; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-140-470-174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; TYPE: PRT ; ORGANISM: Homo Sapien US-10-175-746-174
                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                 RESULT 14
US-10-175-746-174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 15
US-10-176-918-174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT
                                                                                                                                                                  Matches
                                                                                                                                                                                                                              a
                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q.
```

Sequence 174, Application US/10176918 publication No. US20030027275A1

```
1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MKGWGWIALLLIGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP 60
                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3330R1C382
CURRENT APPLICATION NUMBER: U5/10/176,918
CURRENT APPLICATION NUMBER: U5/10/176,918
PRIOR PILLING DATE: 2002-06-20
PRIOR APPLICATION TEMPORE - See File Wrapper or Palm
NUMBER OF SEQ ID NOS: 550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           °,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 182;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 83.1%; Score 369; DB 4; Length 18 Best Local Similarity 100.0%; Pred. No. 2.2e-35; Matches 69; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Search completed: May 8, 2006, 21:12:01
Job time : 170 secs
                                                                                                                                                                                                                                                                               Stewart, Timothy A
Beresini, Maureen
                                                                                                                            Gerritsen, Mary E.
                                                                                                                                                                                                                                                                                                                               Watanabe, Colin K
Wood, William
                                                                                                                                                                           Godowski, Paul J.
Gurney, Austin L.
                                                  Desnoyers, Luc
Filvaroff, Ellen
                                                                                                                                                                                                                           Sherwood, Steven
Smith, Victoria
                                                                                                    Gao, Wei-Qiang
                          DeForge, Laura
                                                                                                                                                                                                                                                                                                          Tumas, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 DGSQSVVEV 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 DGSQSVVEV 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT
; ORGANISM: Homo Sapien
US-10-176-918-174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID NO 174
                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
APPLICANT:
```

THIS PAGE BLANK (USPTC:

```
20:49:24 ; Search time 186 Seconds (without alignments) 196.067 Million cell updates/sec
GenCore version 5.1.8
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                            - protein search, using sw model
                                                                                                                 8, 2006,
                                                                                                                 Мау
                                                                          OM protein
                                                                                                                 Run on:
```

444 1 MKGWGWLALLLGALLGTAWA......QSVVEVTVTVPPNKVAHSGF US-10-716-824-2 Perfect score: Sequence: Title:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

83

2443163 seqs, 439378781 residues Searched:

Total number of hits satisfying chosen parameters:

2443163

seq length: 0 seq length: 200000000 88 28 Minimum I Maximum I

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

geneseqp2002s:* geneseqp2003as:* geneseqp2003bs:* geneseqp2004s:* geneseqp1990s:* geneseqp2000s:* geneseqp2001s:* geneseqp1980s:* geneseqp2005s:* A_Geneseq_21:* •• Database

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

					SUMMARIES	
Result	Ç	Query	1		f	
NO.	score	Match	watch Length	8 !	ID	Description
-	444	100.0	83	ო	AAY15130	Aay15130 Human Zsi
7	444	100.0	84	~	AAW88469	Aaw88469 Human sec
m	444	100.0	84	N	AAY36199	_
4	444	100.0	84	9	ADA57311	Ada57311 Human sec
ហ	444	100.0	84	7	ADC74386	Adc74386 Human sec
9	444	100.0	84	<u>r</u>	ADD38010	Add38010 Human sec
7	444	100.0	84	^	ADJ46051	Adj46051 Novel hum
ω	444	100.0	84	œ	ADP19460	Human
თ	444	100.0	82	~	AAY30716	Aay30716 Amino aci
10	410.5	92.5	97	~	AAY36152	Aay36152 Human sec
11	410.5	92.5	97	7	ADJ45957	
12	369	83.1	168	œ	ADP29267	Adp29267 Human sec
13	369	83.1	182	~	AAW88474	Aaw88474 Human sec
14	369	83.1	182	N	AAY36200	Aay36200 Human sec
15	369	83.1	182	٣	AAY15135	Aay15135 Human Zsi
16	369	83.1	182	m	AAY52391	Aay52391 Human tra
17	369	83.1	182	4	AAU12258	Aau12258 Human PRO
	369	83.1	182	Ŋ	AAU97063	Aau97063 Transmemb
.19	369	83.1	182	Ŋ	ABB09717	Abb09717 Amino aci
20	369	83.1	182	9	ABO17702	Abol7702 Novel hum
21	369	83.1	182	9	ADA56723	Ada56723 Human sec
22	369	83.1	182	9	ABU80956	Abu80956 Human PRO
23	369	83.1	182	9	ABU66656	Abu66656 Human PRO
24	369	83.1	182	9	ABU59737	Abu59737 Novel sec

Human Human			Ношо		Human	Novel	Human	Human	Нишап	Human	Ada85650 Novel hum	Нишап	Human	Novel	Human	Novel	Human	Adb18623 Novel hum
6 ABO24927 6 ABU66932	6 ADA45693 6 ADA76124	•			6 ADB27723			6 ADA47552	6 ADA67347	6 ADB30354	6 ADA85650	6 ADA96862	6 ADA79166	6 ADA87305	6 ADB16507	6 ADA91599	6 ADB14662	6 ADB18623
.1 182	.1 182																	.1 182
369 83 369 83		369 83.1									_	_	_	_			_	369 83
25 26	27 28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45

ALIGNMENTS

RESULT 1

Secretory protein-9; Human Zaig9; chromosome 12q15 region; tumour; overexpression; antagonist; antibody; antisense nucleotide; detection; treatment; receptor; radio-label; fusion; polypeptide toxin; technique; down-regulation; probe; diagnostic; thérapeutic; cancer; brain; liver; Human Zsig9 secretory protein partial dequence. AAY15130 standard; protein; 83 AA (first entry) stomach; lymphoma 07-FEB-2000 AAY15130; AAY15130

Location/Qualifiers Homo sapiens Protein Peptide ξé

1. .20 — Label= Signal_sequence 21. .83 /label= Mature_Zsig9_sedcretory_protein 21. .83 /label= Mature_Zsig9_sedcretory_protein 21. .7the sequence adcording to the specification has 84 amino acids, but only 83 amino acids are shown in the sequence listing"

WO9960405-A1

99WO-US011107. 19-MAY-1999; 25-NOV-1999

98US-00081183. 19-MAY-1998;

(ZYMO) ZYMOGENETICS INC.

Moore EE, Taft DW;

WPI; 2000-039447/03. N-PSDB; AAZ08284.

Detecting tumors using antibodies, antagonists and antisense nucleotides to secretory protein-9 (Zsig9).

Claim 1; Page 30; 45pp; English

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New mammalian secretory peptide-9 (Zaig9) - used as a growth enhancer for placenta, liver and heart, and as an indicator of cancer.
The present protein sequence is the secretory protein-9, Zsig9. This sequence is mapped to the human chromosome 12q15 region. It is overexpressed in tumours. Antagonists, antibodies and antisense nucleotides to Zsig9 are useful for detecting and treating tumours. The antagonist may be an antibody or receptor to Zsig9 and it may be radiolabelled or fused to a polypeptide toxin. It can be used for down-regulating the overexpression of Zsig9. The gene sequence can be used ancelet acid probes to detect NNA encoding Zsig9. The Zsig9 sequence facilitates improved diagnostic and therapeutic techniques for detecting and treating cancers, especially of the brain, liver, stomach, lymphoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDFKKTIQMGSFRINP
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Secretory peptide-9, Zsig9; human; tumour marker; cancer; therapy; diagnosis; growth enhancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                        Length 83;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Whitmore TE;
                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 444; DB 3; 100.0%; Pred. No. 4.3e-47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. .20
/note= "signal peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Jaspers SR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "mature protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DGSQSVVEVTVTVPPNKVAHSGF 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DGSQSVVEVTVTVPPNKVAHSGF 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human secretory peptide-9 (Zsig9).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAW88469 standard; protein; 84 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 8; Page 67; 85pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    97US-0051704P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          97US-00888088
98US-00081338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98US-0085983P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98WO-US013859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98US-0089899P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Jelinek LJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (ZYMO ) ZYMOGENETICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                      83; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21. .84
/note= "
                                                                                                                                                                                                                                                                                          at an early stage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1999-106055/09.
                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-PSDB; AAX06968
                                                                                                                                                                                                                                                                                                                                             Sequence 83 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disulfide-bond
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO9901554-Al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              02-JUL-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sheppard PO,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14-JAN-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    03-JUL-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                03-JUL-1997;
19-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19-MAY-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAW88469;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAW88469

XXX

AAW8

AAC

AAW8

XXX

AAW8

XXX

AAW8

A1ag

XXX

Adag

XXX

Adag

Ad
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 2
              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠ
```

```
This is the amino acid sequence of novel human secretory peptide-9, or 28199, a polypeptide that is overexpressed in a number of human tumours including brain, liver, lung, oesophageal, stomach, colon, rectal, thyroid and lymphoma tumors. Thus, Z819 can be used as an indicator for cancer. Z8199 cDNA (see AAX06668) was discovered in a placenta clone from a full-term pregnancy CDNA library. The invention provides Z8199 cone from copyreptides (see AAX06968-77) including mature polypeptides, other copyressed forms, variants and mouse orthologues, and polymucleotides (see AAX06968-70) encoding them. Antibodies raised against Z8199 can be used commons and used the presence of Z8199, and thus the corresponding control of the placents which overexpress Z8199. Antisense conclosed from Z8199 cDNA can also be labelled with radioisotopes or fused with toxins and used to treat tumours which overexpress Z8199. Antisense conclosed from Z8199 cDNA can also be used to inhibit the growth of tumour cells. Z8199 protains can be used to enhance the growth corrections development of the placenta, heart or liver
                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY36129-Y36222 represent novel human secreted proteins encoded by the extended cDNA sequences represented in AAX97813-X97906. The proteins of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Secreted protein; human; cytostatic; thrombotic; osteopathic; forensic; diagnostic; gene therapy; chromosome mapping; secretion vector.
                                                                                                                                                                                                                                                                                                                                                                 1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP
                                                                                                                                                                                                                                                                                                                                                                                     Gapa
                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                    100.0%; Score 444; DB 2; Length 84; 100.0%; Pred. No. 4.4e-47; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Dumas Milne Edwards J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Extended cDNAs encoding secreted proteins.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 7; Page 298-299; 307pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                      83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAY36199 standard; protein; 84 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                        DGSQSVVEVTVTVPPNKVAHSGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97US-0066677P.
97US-0069957P.
98US-0014121P.
98US-0091563P.
98US-0096116P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98WO-IB001862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bougueleret L, Duclert A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human secreted protein #71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                         83; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1999-347472/29.
N-PSDB; AAX97883.
                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (GEST ) GENSET
                                                                                                                                                                                                                                                                         Sequence 84 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13-APR-1998;
10-AUG-1998;
04-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  27-MAY-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17-DEC-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAY36199;
                                                                                                                                                                                                                                                                                                                            Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAY36199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
 X00000000000000000X8
                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                         8
```

```
ö
                                                                         They
the invention have cytostatic, thrombotic and osteopathic activity. The extended cDNAs can be used to express secreted proteins or parts of them or to obtain antibodies capable of binding to the secreted proteins. They may also be used in diagnostic, forensic, gene therapy and chromosome mapping procedures. Uses also include design of expression vectors and
                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 respiratory disorder; cancer; CNS disorder; neurodegenerative disorders; inflammatory bowel disease; nephritis; Crohn's disease; asthma; allergy; multiple sclerosis; ischaemic brain injury; Parkinson's disease; Alzheimer's disease; atherosclerosis; myocarditis; chromosome mapping;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention relates to 592 new human secreted polypeptides useful for diagnosing, treating or preventing e.g. immune disorders, inflammatory conditions, respiratory disorders, cancers, CNS disorders, or neurodegenerative disorders, or polypeptides comprising an amino acid sequence at least 95% identical to the new sequences. The polypeptides,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New human setreted polypeptides and polynucleotides, useful for diagnosing, treating or preventing e.g. immune disorders, inflammatory conditions, respiratory disorders, cancers, CNS disorders, or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP
                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP
                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       immunosuppressive; antiinflammatory; antiasthmatic; antiallergic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             triple helix formation; antisense gene therapy; forensic biology
                                                                                                                                                                                                                                                                                                                                                                           ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cytostatic, terebroprotective, neuroprotective, nootropic, cardiovascular, antiarteriosclerotic, gene therapy, human secreted protein, immune disorder, inflammation;
                                                                                                                                                                                                                                                                                                                                                                           0; Indels
                                                                                                                                                                                                                                                                                                 Score 444; DB 2;
Pred. No. 4.4e-47;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 13; SEQ ID NO 1501; 1754pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADAS7311 standard; protein; 84 AA
                                                                                                                                                                                                                                                                                                            100.0%; F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 DGSQSVVEVTVTVPPNKVAHSGF
                                                                                                                                                                                                                                                                                                     100.08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-MAR-2001; 2001US-0277340P.
19-JUL-2001; 2001US-0306171P.
13-NOV-2001; 2001US-0331287P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19-MAR-2002; 2002WO-US008278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (HUMA-) HUMAN GENOME SCI INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           neurodegenerative disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        secreted protein #5.
                                                                                                                                                                                                                                                                                                                                                                           83; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2003-167512/16.
N-PSDB; ADA56415.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rosen CA, Ruben SM;
                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                       secretion vectors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO2002102994-A2.
                                                                                                                                                                                                                                      Sequence 84 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                27-DEC-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADA57311;
                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
ADAS 731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCCCX RANGE REAL RANGE REAL RANGE R
   888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                             ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
```

```
additionable of antibody transmissing that both that be added and the polypeptides, agonides or antagonists that binds to the polypeptide, are useful in preparing diagnostic or pharmaceutical compositions for diagnostic, or preventing an e.g. immune discase, inflammatory conditions (e.g. inflammatory bowel disease, nephritis or Crohn's disease), respiratory disorders (e.g. asthma and allergy), cancers (e.g. gastric, ovarian or lung cancer), CNS disorders (e.g. multiple sclerosis or ischaemic brain injury), neurodegenerative disorders (e.g. parkinson's disease or Alzheimer's disease), and cardiovascular disorders (e.g. atherosclerosis or myocarditis). The polymucleotides are useful for chromosome (apping), for controlling gene expression through triple helix formation or antisense DNA or RNA, in gene therapy, for identifying individuals from minute biological amples, in forensic biology, and as hybridization or antisense DNA or RNA, in gene therapy, for identifying individuals from minute biological amples, in forensic biology, and as hybridization corresponds to raise antibodies, for testing, biological activities, and for treating or preventing neural disorders, immune system disorders, cernal, prolifectative and/or cancerous diseases. This sequence corresponds to enal, prolifectative and/or cancerous diseases. This sequence data for this patent did form part of the printed specification, but was obtained in electronic format directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       antianaemic; antirheumatic; antiarthritic; antinflammatory; antithyroid; antidiabetic; immunosuppressive; dermatological; nephrotropic; antipacterial; virucide; fungicide; antipacterial; virucide; fungicide; antiparaaitic; antiatreriosqlerotic; vulnerary; cytostatic; haempooletic; haematologic; anaemia; autoimmune disorder; rheumatoid arthritis; inflammation; Grave's disease; diabetes; systemic lupus erythematosus; glomeruldmephritis; neurodegenerative; Parkinson's; Alzheimer's; wound; hyperproliferative; atherosclerosis; cancer; bacterial; viral; fungal; parasitic infection; gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MKGWGWLALLIGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDFKKTIQMGSFRINP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP
antibodies or antibody fragments that bind to the polypeptides,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6; Length 84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4.4e-47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 444;
100.0%; Pred. No. 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human secreted protein - SEQ ID 1019.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 DGSQSVVEVTVTVPPNKVAHSGF 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADC74386 standard; protein; 84 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DGSQSVVEVTVTVPPNKVAHSGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2001US-0277340P.
2001US-0306171P.
2001US-0331287P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19-MAR-2002; 2002WO-US008277.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-JAN-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         83; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO2003038063-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 84 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19-JUL-2001;
13-NOV-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21-MAR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            human,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         datches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADC74386
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
```

us-10-716-824-2.rag

```
31-JUL-2003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           06-MAY-2004
Rosen CA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADJ46051;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADJ46051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                           The invention relates to a novel human secreted polypeptide comprising a defined sequence given in the specification. The polypeptide, nucleic acid molecule, antibody, agonist or antagonist of the invention may be useful for preparing a composition for diagnosing or treating a haemopoletic or haematologic disorder such as anaemia, autoimmune disorders such as rheumation, cave's disease, adiabates, systemic lupus erythematosus, inflammation, Grave's disease, neurodegenerative disorders including parkinson's disease and Alzheimer's disease, wounds and hyperproliferative disorders including atherosolerosis or cancer, as well as bacterial, viral, fungal or parasitic infections. The polypeptide may also be used during gene therapy procedures and for identifying a binding partner by contacting the polypeptide with a binding partner and determining whether the binding partner increases or decreases the activity of the polypeptide.

The current sequence is that of the human secreted protein of the
                                                                                                                                                                                                                                                                                                                                                                                                              ô
                                                                              New human secreted polypeptide for diagnosing, preventing or treating hematopoietic or hematologic disorders (e.g. anemia), autoimmune disorders (e.g. diabetes) or hyperproliferative disorders (e.g. cancer or atherosclerosis).
                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDFKKTIQMGSFRINP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              human secreted protein; Antiallergic; Antiinflammatory; Antibacterial;
Anti-HIV; Cytostatic; Immunosuppressive; Hemostatic.
                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                      Length 84;
                                                                                                                                                                                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                                                                                                                                                      Score 444; DB 7;
Pred. No. 4.4e-47;
                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                       claim 16; SEQ ID NO 1019; 2272pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 DGSQSVVEVTVTVPPNKVAHSGF 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DGSQSVVEVTVTVPPNKVAHSGF 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADD38010 standard; protein; 84 AA
                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21-MAR-2001; 2001US-0277340P.
19-JUL-2001; 2001US-0306171P.
13-NOV-2001; 2001US-0331287P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19-MAR-2002; 2002WO-US008279.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (HUMA-) HUMAN GENOME SCI INC
(HUMA-) HUMAN GENOME SCI INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human secreted protein #193.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                      Query Match 100.
Best Local Similarity 100.
Matches 83; Conservative
                       Ruben SM;
                                            WPI; 2003-430516/40.
N-PSDB; ADC73771.
                                                                                                                                                                                                                                                                                                                                                                 Sequence 84 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200290526-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15-JAN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14-NOV-2002
                       Rosen CA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADD38010;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
```

```
The present invention relates to an isolated polypeptide or human secreted protein. The polypeptides, nucleic acid molecules, antibodies or their fragments, and agonists or antagonists that bind are useful for their fragments and adonists or asthmatic disorders. The polypeptide is also useful for treating allergic or asthmatic disorders. The polypeptide is also useful for identifying a binding partner by contacting the polypeptide with a binding partner, and determining whether the binding partner increases or decreases the activity of the polypeptide. The polypeptides and nucleic acid molecules are also useful for detecting, preventing, diagnosing, continguisting treating or ameliorating informatory disorders or prognosticating, treating or ameliorating informatory disorders in explastic diseases, wound healing and disorders of epithelial cell proliferation, immune disorders, cardiovascular disorders, blood-related disorders, infectious diseases, endocrihe disorders, or gastrointestinal classification, radiation hybrid mapping or long-range restriction continuous mapping, as molecular weight markers, or as hybridization or diagnostic mapping, as molecular weight markers, or as hybridization of disported inmunological probes for differential identification of the tissues immunological probes for differential identification of the tissues immunological probes or differential identification of the tissues human are applied to the purpoper or an expense or properties and markers or an expense or an expense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    secreted protein; upstream regulator; gene therapy; protein purification; protein synthesis; chromosomal mapping; individual identification; forensic; hereditary disease; drug reaction; immunoassay; epitope mapping; vaccine; immune system regulation; haematopoietic system; tissue growth; reproductive hormone; cell migration; blood clotting; receptor/ligand interaction; adhesion molecule; assisted drug deliveky; human glial maturation factor gamma-2; heurite outgrowth; neurite resprouting; human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP 60
                                                                                                                                                                                                          New human secreted proteins and nucleic acid molecules, useful for preparing a diagnostic or pharmaceutical composition for diagnosing or treating allergic or asthmatic disorders, or related immediate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel human secreted protein-related protein seguence SegID204.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 444; DB 7; Length 84; 100.0%; Pred. No. 4.4e-47; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 1; SEQ ID NO 492; 1323pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DGSQSVVEVTVTVPPNKVAHSGF 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DGSQSVVEVTVTVPPNKVAHSGF 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADJ46051 standard; protein; 84
                                                                                                                                                                                                                                                                                                                                                                                        hypersensitivity disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 100."
Matches 83; Conservative
Ruben SM;
                                                                                                           WPI; 2003-140218/13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           secreted protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US2003144490-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 84 AA;
```

(EDWA/) (DUCL/) (BOUG/)

agents.

```
The invention relates to human cDNA sequences that encode human secreted proteins. The invention also relates to an antibody that specifically blinds to a polypeptide of the invention and and amethod of binding the polypeptide to an antibody. The polymudication of binding the polypeptide to an antibody. The polymudication of binding the entire secreted proteins which they encode and for distinguishing the entire secreted proteins which they encode and for distinguishing between human tissues and cells, and for distinguishing between human tissues and cells, and for the polymucleotides comprising the cDNAs. The polymucleotides and polypeptides are useful in forensic procedures or diagnostic procedures to identify individuals with genetic diseases resulting from abnormal expression of the genes corresponding to the cDNAs. The sequences are also useful in gene therapy to control or treat genetic diseases. This sequence represents a human secreted polypeptide of the invention. Note:

The sequence data for this patent did not form part of the printed specification but was obtained in electronic format from USPTO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New isolated polynucleotide encoding secreted polypeptide, useful for gene therapy, or in diagnostic procedures to identify individuals having genetic diseases resulting from abnormal expression of the genes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDFKKTIQMGSFRINP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dumas Milne Edwards J, Bougueleret L, Jobert S, Clusel C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 444; DB 8; Length 84; 100.0%; Pred. No. 4.4e-47; ive 0; Mismatches 0; Indels
                                                                                                       Human; secreted protein; genetic disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 2; SEQ ID NO 716; 113pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 DGSQSVVEVTVTVPPNKVAHSGF 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAY30716 standard; protein; 85 AA
                                                     Human secreted polypeptide #311.
                                                                                                                                                                                                                                                                                                          15-OCT-2001; 2001US-00978360.
                                                                                                                                                                                                                                                                                                                                                       17-DEC-1998; 98WO-IB002122.
09-FEB-1999; 99WO-IB000282.
21-JUN-2000; 2000WO-IB000951.
15-SEP-2000; 2000US-00663860.
     26-AUG-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity 100.
nes 83; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2004-440404/41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (GEST ) GENSET SA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-PSDB; ADP19055.
                                                                                                                                                                                                       US2004110939-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 84 AA;
                                                                                                                                                       Homo sapiens.
                                                                                                                                                                                                                                                          10-JUN-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Duclert A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY30716
  SAXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This invention relates to novel purified isolated polymucleotides which comprise a sequence that encodes at least 10 amino acids (aa) from any of comprise a sequence that encodes at least 10 amino acids (aa) from any of the secreted polypeptides encoded by human cDNA contained in the corresponding deposited clone. The DNA sequences of the invention encode secreted proteins (close the irragments) and can be used to identify/isolate upstream regulators, potentially useful in gene therapy or protein purification, by controlling protein synthesis, as probes for chromosomal mapping, identification of individuals, and for diagnosis or forensics, for example identifying genes associated with hereditary diseases or drug reactions, for recombinant expression of the encoded proteins or, where the DNA sequence encodes a signal peptide, for diseases or the invention can be used to raise antibodies, useful for detecting the polypeptide, as (ant) agonists, or for preparing cuseful for detecting the polypeptide, as (ant) agonists, or for preparing mati-idiotypic antibodies, as tags in for example immunosasays, epitope agents with biological activity and as therapeutic agents with, continue or haematopoietic systems, tissue growth, reproductive contentially, a very wide range of activities, for example regulation of the immune or haematopoietic systems, tissue growth, reproductive chormones, cell migration, blood clotting or receptor/ligand interaction, also as adhebion molecules for assisted drug delivery. A typical isolated sequence is human glial maturation factor gamma-2, which stimulates numainte outgrowth and resprouting. The present sequence is that of a human secreted protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MKGWGWLALLLGGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDFKKTIQMGSFRINP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New nucleic acid encoding secreted human polypeptides, useful e.g. in gene therapy or diagnosis, also encoded proteins, potential therapeutic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 444; DB 7; Length 84; 100.0%; Pred. No. 4.4e-47; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                       Bougueleret L;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 11; SEQ ID NO 204; 269pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DGSQSVVEVTVTVPPNKVAHSGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97US-0066677P.
97US-0069957P.
98US-0074121P.
98US-0081563P.
                                                                                                                                                  98US-0096116P.
98US-0099273P.
98US-00191997.
10-DEC-2002; 2002US-00319763.
                                                                                                                                                                                                                               2000US-00663600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 100.0
                                                                                                                                                                                                                                                                                                                                                                                  Duclert A,
                                                                                                                                                                                                                                                                               EDWARDS J D M.
DUCLERT A.
                                                                                                                                                                                                                                                                                                                               BOUGUELERET L.
                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2003-851788/79.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-PSDB; ADJ46004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 84 AA;
                                                                                                                                                                                                                                                                                                                                                                                    Edwards JDM,
                                                                                                                                                                                                                               15-SEP-2000;
                                                                                                                                                                          04-SEP-1998;
13-NOV-1998;
                                                                                                                             13-APR-1998;
                                                                                                                                                     10-AUG-1998;
                                                                                                     09-FEB-1998;
                                                                             17-DEC-1997
```

9 9

18-NOV-1999 (first entry)

AAY30716;

ADP19460 standard; protein; 84 AA.

ADP19460;

ADP19460 ID ADP1 XX AC ADP1 XX

RÉSULT 8

61

g

61

g ઠ

Gaps ; 0 ဖ

```
AAY36129-Y36222 represent novel human secreted proteins encoded by the extended cDNA sequences represented in AAX97813-X97906. The proteins of the invention have cytostatic, thrombotic and osteopathic activity. The extended cDNAs can be used to express secreted proteins or parts of them or to obtain antibodies capable of binding to the secreted proteins. They may also be used in diagnostic, forensic, gene therapy and chromosome mapping procedures. Uses also include design of expression vectors and
                                                                                                                                                                                Secreted protein; human; cytostatic; thrombotic; osteopathic; forensic; diagnostic; gene therapy; chromosome mapping; secretion vector.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Dumas Milne Edwards
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Extended cDNAs encoding secreted proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example 28; Page 242; 307pp; English
                 Ź
                 AAY36152 standard; protein; 97
                                                                                                                                                                                                                                                                                                                                                                                                                    97US-0066677P.
97US-0069957P.
98US-0074121P.
98US-0096116P.
98US-0096116P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           92.5%;
                                                                                                                                                                                                                                                                                                                                                                              98WO-IB001862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 94.v.,
Best Total 79; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ä
                                                                                                                                             Human secreted protein #24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bougueleret L, Duclert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1999-347472/29.
                                                                                                   (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             secretion vectors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N-PSDB; AAX97836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 97 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (GEST ) GENSET
                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                               W09925825-A2
                                                                                                                                                                                                                                                                                                                                                                              13-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            04-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  06-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                        L3-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                            17-DEC-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13-APR-1998;
                                                                                                     23-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  39-FEB-1998
                                                                                                                                                                                                                                                                                                                                       27-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10-AUG-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADJ45957;
                                                           AAY36152;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 11
AAY36152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADJ45957
                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           emerapy. Tarinizations can asso, be used processed of mutations in the polymerleotide. Specific uses include developing products for the diagnosis or treatment of cancer, tumors, products for the diagnosis or treatment of cancer, tumors, neurodegenerative disorders, developmental abnormalities and fetal deficiencies, blood disorders, sepsis, diseases of the immune system, autoimmune diseases, inflammation, allergies, Alzheimer's and cognitive disorders, schizophrenia, obesity, osteoporosis, arthritis, infections, asthma, sepsis, acne, psoriasis, cardiovascular disorders, and reproductive disorders. The polypeptides or polymucleotides an also be used as food additives or preservatives, such as to increase or decrease storage capabilities, fat content, lipid, protein, carbohydrate, vitamins, minerals, cofactors or other nutritional components
                                                                                                 allergy; Alzheimer's disease; cognitive disorder; schizophrenia; obesity; osteoporosis; arthritis; infection; AIDS; diabetes; asthma; connective tissue disorder; transplant rejection; sepsis; acne; psoriasis; cardiovascular disorder; reproductive disorder; food additive; food preservative; storage capability.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAY30701-37 represent human secreted proteins. The polynucleotides and their corresponding secreted polypeptides are useful for preventing, treating or ameliorating medical conditions, e.g. by protein or gene therapy. Pathological conditions can also be diagnosed by determining the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New human genes and the secreted polypeptides they encode, useful for diagnosis and treatment of e.g. cancers, neurological disorders, immune diseases, inflammation or blood disorders.
                                 Secreted protein; gene therapy; cancer; tumor; fetal deficiency; neurodegenerative disorder; developmental abnormality; blood disorder; immune system disease; autoimmune disease; leukemia; inflammation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDFKKTIQMGSFRINP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ebner R, Ruben SM, Rosen CA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 444; DB 2; 100.0%; Pred. No. 4.4e-47;
Amino acid sequence of a human secreted protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DGSQSVVEVTVPPNKVAHSGF 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Florence K, Brewer LA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 11; Page 196; 246pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DGSQSVVEVTVTVPPNKVAHSGF
                                                                                                                                                                                                                                                                                                                                                                                                98US-0076051P.
98US-0076052P.
98US-0076053P.
98US-0076054P.
                                                                                                                                                                                                                                                                                                                                                             99WO-US003939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity 100.
Matches 83; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1999-550857/46.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-PSDB; AAZ10655.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 85 AA;
                                                                                                                                                                                                                                   Homo sapiens,
                                                                                                                                                                                                                                                                           WO9943693-A1.
                                                                                                                                                                                                                                                                                                                                                             24-FEB-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26-FEB-1998
                                                                                                                                                                                                                                                                                                                     02-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                       26-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                                                                             26-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                              26-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Olsen HS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Duan RD;
```

<u>د</u>

```
secreted protein; upstream regulator; gene therapy; protein purification;
                                                                9
                                                                                              9
                                                               1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP
                                                                                 1 MKGWGWLALLLGALLGTAWARRSRDLHCGACRALVDELEWEIAQVDFKKTIQMGSFRINP
                                  1; Gaps
                                                                                                                                                                                                                                                                                                                                       Novel human secreted protein-related protein sequence SeqID110.
Score 410.5; DB 2; Length 97;
Pred. No. 7.8e-43;
1; Mismatches 3; Indels 1
                                                                                                                                83
                                                                                                                                                              84
                                                                                                                                 DGSQSVVEVTVTV-PPNKVAHSGF
                                                                                                                                                  DGSQSVVEVTVTXSPKTKVAHSGF
                                                                                                                                                                                                                                            ADJ45957 standard; protein; 97 AA
```

RESULT 10

В ò 셤

ò

```
This interaction relates to novel purities isolated polymorecribes which comprise a sequence that encodes at least 10 amino acids (as) from any of targements of polymeptides encoded by human conformation, or fragments of polymeptides encoded by human conformation in the corresponding deposited clone. The DAA sequences of the invention encode secreted proteins (or their fragments) and can be used to identify/isolate upstream regulators, potentially useful in gene therapy or protein purification, by controlling protein synthesis, as probes for chromosomal mapping, identification of individuals, and for diagnosis or chromosomal mapping, identification of individuals, and for diagnosis or chromosomal mapping, identification of individuals, and for diagnosis or chromosomal mapping, identification of individuals, and for diagnosis or chromosomal mapping for recombinant expression of the encoded proteins or, where the DNA sequence encodes a signal peptide, for diseases or drug reactions, for recombinant expression of the encoded proteins or, where the DNA sequence encodes a signal peptide, for the DNA sequences of the invention can be used to raise antibodies, and checking the polymeptide, as (ant) agonists, or for preparing anti-diotypic antibodies, as tags in for example immunosasays, epitope mapping or vaccines, also as molecular weight markers, to screen for agents with biological activity and as therapeutic agents with, contentially, a very wide range of activities, for example remunosation, charmones, cell migration, blood clotting or receptor/ligand interaction, also as adhesion molecules for assisted drug delivery. A typical isolated sequence is human glial maturation factor gamma-2, which stimulates continued to a signal and partial mature sequence of a human secreted protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New nucleic acid encoding secreted human polypeptides, useful e.g. in gene therapy or diagnosis, also encoded proteins, potential therapeutic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This invention relates to novel purified isolated polynucleotides which
protein synthesis; chromosomal mapping; individual identification; forensic; hereditary disease; drug reaction; immunoassay; epitope mapping; vaccine; immune system regulation; haematopoietic system; tissue growth; reproductive hormone; cell migration; blood clotting; receptor/ligand interaction; duman glial maturation factor gamma-2; neurite outgrowth; neurite resprouting; human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 28; SEQ ID NO 110; 269pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bougueleret L;
                                                                                                                                                                                                                                                                                                                                                                                  97US-0069957P.
98US-0074121P.
98US-0081563P.
98US-0096116P.
                                                                                                                                                                                                                                                                                                                                                                  97US-0066677P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15-SEP-2000; 2000US-00663600
                                                                                                                                                                                                                                                                                                                        2002US-00319763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98US-00191997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Edwards JDM, Duclert A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ермакря у в м.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BOUGUELERET L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2003-851788/79.
N-PSDB; ADJ45910.
                                                                                                                                                                                                                                       US2003144490-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DUCLERT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 97 AA;
                                                                                                                                                                                               Ното варіеня
                                                                                                                                                                                                                                                                                                                      10-DEC-2002;
                                                                                                                                                                                                                                                                              31-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                            09-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                13-APR-1998
                                                                                                                                                                                                                                                                                                                                                                                      17-DEC-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                      10-AUG-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          04-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (DOCT/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (EDWA/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   agents.
```

```
Cytostatic, Antiinflammatory; Immunosuppressive; Antibacterial; Virucide; cancer; inflammatory; immune; human secreted protein.
83
                                               DGSQSVVEVTVTXSPKTKVAHSGF 84
                                                                                                                                        #34.
                                DGSQSVVEVTVTV-PPNKVAHSGF
                                                                                       ADP29267 standard; protein; 168
                                                                                                                                                                                                                                                                                                                                       2002US-0406653P.
2002US-0406655P.
2002US-0406666P.
2002US-0410946P.
2002US-0410947P.
                                                                                                                                                                                                                                                                                                                                                                                       2002US-0410949P.
2002US-0410953P.
2002US-0410957P.
2002US-0410958P.
                                                                                                                                       Human secreted protein SEQ ID
                                                                                                                                                                                                                                                                                                       2002US-0406616P.
2002US-0406640P.
2002US-0406642P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       2002US-0411019P.
2002US-0411022P.
2002US-0411023P.
2002US-0411024P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2002US-0411032P.
2002US-0411035P.
2002US-0411037P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2002US-0411041P.
2002US-0411045P.
2002US-0411046P.
                                                                                                                                                                                                                                                                                2002US-040660BP.
2002US-0406611P.
2002US-0406612P.
                                                                                                                                                                                                                                                                                                                                                                                                                       2002US-0410959P.
2002US-0410960P.
2002US-0410961P.
                                                                                                                                                                                                                                                                                                                                2002US-0406646P
                                                                                                                                                                                                                                                                                                                                                                                                                                                2002US-0410962P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2002US-0411101P
                                                                                                                                                                                                                                28-AUG-2003; 2003WO-US026780
                                                                                                                       12-AUG-2004 (first entry)
                                                                                                                                                                                               WO2004035732-A2.
                                                                                                                                                                                                                                                                                                       29-AUG-2002;
29-AUG-2002;
29-AUG-2002;
                                                                                                                                                                                                                                                                                                                               29-AUG-2002;
29-AUG-2002;
29-AUG-2002;
29-AUG-2002;
                                                                                                                                                                                                                                                                                                                                                                                                17-SEP-2002;
17-SEP-2002;
17-SEP-2002;
                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                 29-AUG-2002;
                                                                                                                                                                                                                                                                                       29-AUG-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  17-SEP-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -SEP-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17-SEP-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17-SEP-2002;
                                                                                                                                                                                                               29-APR-2004
                                                                                                       ADP29267;
                                61
                                                                         RESULT 12
                                                                                 ADP29267
                                                                                               g
                                             g
ઠે
                               ઠે
```

ij

Gaps

ä

92.5%; Score 410.5; DB 7; Length 97; 94.0%; Pred. No. 7.8e-43; ive 1; Mismatches 3; Indels 1

79; Conservative

Query Match Best Local Similarity Matches 79; Conserv

```
This is the amino acid sequence of a human secretory peptide-9 (Zsig9) variant (see also AAW88469). Zsig9 is overexpressed in human brain, liver, lung, osophageal, stomach, coloh, rectal, thyroid and lymphoma cumus, and can thus be used as an indicator for cancer. Zsig9 variant CDNA is provided in AAX06969. The invention provides Zsig9 polypeptides (see AAW88469-77) including mature polypeptides, other processed forms, variants and mouse orthologues, and polymoclectides (see AAX06968-70) encoding them. Antibodies raised against Zsig9 can be used as diagnostic agents to determine the presence of Zsig9, and thus the presence of cancer. They can also be labelled with fadioisotopes or fused with toxins and used to treat tumours which overexpress Zsig9. Antisense nucleotides derived from Zsig9 proteins can also be used to inhibit the growth of tumour cells. Zsig9 proteins can be used to enhance the growth or development of the placenta, heart or liver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New mammalian secretory peptide-9 (ZsigB) - used as a growth enhancer for placenta, liver and heart, and as an indicator of cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP
                              Secretory peptide-9; Zsig9; human; tumour marker; cancer; therapy; diagnosis; growth enhancer; variant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Jaspers SR, Whitmore TE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83.1%; Score 369; DB 2; L
100.0%; Pred. No. 2.5e-37;
tive 0; Mismatches 0;
Human secretory peptide-9 (Zsig9) variaht

    .20
    /note= "signal peptide"

                                                                                                                                                                                                                 /note= "mature protein"
                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 8; Page 74-75; 85pp; English
                                                                                                                                                                                                                                                                                                                                                                    97US-0051704P.
97US-00888088.
98US-00081338.
98US-0085983P.
98US-00099005.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98US-0089899P
                                                                                                                                                                                                                                                                                                                                    98WO-US013859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sheppard PO, Jelinek LJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                          . .182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (ZYMO ) ZYMOGENETICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DGSQSVVEV 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 DGSQSVVEV 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1999-106055/09.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N-PSDB; AAX06969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 182 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Sime
                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                        WO9901554-A1
                                                                                                                                                                                                                                                                                                                                    02-JUL-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      17-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                             03-JUL-1997
                                                                                                                                                                                                                                                                                                                                                                                                                 19-MAY-1998
                                                                                                                                                                                                                                                                                               14-JAN-1999
                                                                                                                                                                                                                                                                                                                                                                           03-JUL-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                      19-MAY-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                       Peptide
                                                                                                                                                                                                Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 14
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New nucleic acid molecule for diagnosing, preventing or treating diseases such as proliferative (e.g. cancer), inflammatory, immune, metabolic, genetic, bacterial and viral diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present invention relates to an isolated nucleic acid molecule encoding a polypeptide which is believed to be cytostatic, antifilammacory, immunosuppressive, antibacterial and virucidal. The composition and methods are useful for diagnosing, preventing and treating diseases such as proliferative (e.g. cancer), inflammatory, immuno, metabolic, genetic, bacterial and viral diseases. The present sequence represents a human secreted protein. The present sequence is available on WIPOWEB and is not in the specification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Beaurang PA, Behrens D;
Haishan L, Linnemann T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 168;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                83.1%; Score 369; DB 8; I
100.0%; Pred. No. 2.3e-37;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Williams LT, Chu K, Lee E, Hestir K, Beaur
Halenbeck RF, Huang MM, Kothakota S, Haisha
Pierce K, Wang Y, Wong JGP, Wu G, Zhang H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 1; SEQ ID NO 1265; 428pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (FIVE-) FIVE PRIME THERAPEUTICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAW88474 standard; protein; 182 AA.
                                                                                                                                                                                                                                                                                                                                 2003US-0485325P.
2003US-0486446P.
2003US-0486480P.
2003US-0486891P.
2003US-0486991P.
                                                       2003US-0463732P.
2003US-0467199P.
2003US-0467201P.
2003US-0467203P.
                                                                                                                                                                                                                                   09-JUN-2003; 2003US-0476609P.
09-JUN-2003; 2003US-047664IP.
08-JUL-2003; 2003US-0485218P.
08-JUL-2003; 2003US-0485229P.
2003US-0463700P.
2003US-0463708P.
2003US-0463716P.
                                                                                                                                       2003US-0467230P.
2003US-0471306P.
2003US-0471336P.
                                                                                                                                                                                              22-MAY-2003; 2003US-0472420P.
22-MAY-2003; 2003US-0472430P.
09-UUN-2003; 2003US-0476609P.
                                                                                                                                                                                                                                                                                                                                                                                                                                    2003US-0493341P.
2003US-0493370P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2003US-0493577P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2003US-0493573P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           69; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DGSQSVVEV 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2004-348438/32.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DGSOSWEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 168 AA;
                                                         18-APR-2003; 2
02-MAY-2003; 2
02-MAY-2003; 2
02-MAY-2003; 2
                                                                                                                                     02-MAY-2003; 2
19-MAY-2003; 2
19-MAY-2003; 2
                                                                                                                                                                                                                                                                                                                                                                                                                 15-JUL-2003; 2
08-AUG-2003; 2
08-AUG-2003; 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               08-AUG-2003;
                    18-APR-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
```

9 9

AAY36200 standard; protein; 182 AA.

AAY36200

AAY36200 ID AAY3 XX AC AAY3

(first entry)

10-MAY-1999

AAW88474;

61

ò 셤

RESULT 13 AAW88474

Query Match

Matches

Gaps

.; 0

Length 182; Indels 21. .182 /label= Mature Zsig9 protein variant-4 /note= "Overexpressed in tumours"

99WO-US011107 98US-00081183

1. .20
/label= Signal_sequence Location/Qualifiers

```
(ZYMO ) ZYMOGENETICS INC.
 silent mutation.
                      sapiens.
                                                                                                                              WO9960405-A1
                                                                                                                                                                      19-MAY-1999;
                                                                                                                                                                                           19-MAY-1998;
                                                                                                                                                 25-NOV-1999.
                               Synthetic.
                                                              Peptide
                                                                                   Protein
                      Homo
 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                            extended cDNA sequences represented in AAX97813-X97906. The proteins of the invention have cytostatic, thrombotic and osteopathic activity. The extended cDNAs can be used to express secreted proteins or parts of them or to obtain antibodies capable of binding to the secreted proteins. They may also be used in diagnostic, forensic, gene therapy and chromosome mapping procedures. Uses also include design of expression vectors and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                  Secreted protein, human, cytostatic; thrombotic; osteopathic; forensic; diagnostic; gene therapy; chromosome mapping; secretion vector.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Secretory protein-9; Human Zsig9; chromosome 12q15 region; variant; overexpression; antagonist; antibody; antisense nucleotide; tumour; treatment; receptor; radio-label; fusion; polyeptide toxin; technique; down-regulation; probe; diagnostic; therapeutic; cancer; brain; liver; detection; stomach; lymphoma; alternative splicing; allelic variation;
                                                                                                                                                                                                                                                                                                                                                                 AAY36129-Y36222 represent novel human secreted proteins encoded by the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   83.1%; Score 369; DB 2; Length 182; 100.0%; Pred. No. 2.5e-37; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                     Dumas Milne Edwards J;
                                                                                                                                                                                                                                                                                                                        Extended cDNAs encoding secreted proteins,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human Zsig9 secretory protein variant-4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAY15135 standard; protein; 182 AA
                                                                                                                                                                                                                                                                                                                                            Claim 7; Page 299; 307pp; English.
                                                                                                                                                                    97US-0066677P.
97US-0069957P.
98US-0074121P.
98US-00815637P.
98US-0096116P.
                                                                                                                                                 98WO-IB001862.
                               Human secreted protein #72
                                                                                                                                                                                                                                                                    Bougueleret L, Duclert A,
          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          69; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DGSQSVVEV 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DGSQSVVEV 69
                                                                                                                                                                                                                                                                                        WPI; 1999-347472/29.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                            secretion vectors
                                                                                                                                                                                                                                                                                                    N-PSDB; AAX97884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 182 AA;
                                                                                                                                                                                                                                              (GEST ) GENSET
                                                                                   Homo sapiens.
                                                                                                       WO9925825-A2
                                                                                                                                                 13-NOV-1998;
                                                                                                                                                                                                              10-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          07-FEB-2000
          23-SEP-1999
                                                                                                                                                                     13-NOV-1997;
                                                                                                                           27-MAY-1999
                                                                                                                                                                                 17-DEC-1997
                                                                                                                                                                                          09-FEB-1998
                                                                                                                                                                                                     13-APR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAY15135;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
```

```
The present sequence is a variant of the secretory protein-9, Zsig9 that arises due to alternative splicing, allelic variation or silent mutations that result in amino acid changes. This sequence is mapped to the human chromosome 12q15 region. It is overexpressed in tumours. Antagonists, antibodies and antisense nucleotides to Zsig9 are useful for detecting and treating tumours. The antagonist may be an antibody or receptor to Zsig9 and it may be radio-labelled or fused to a polypeptide toxin. It can be used for down regulating the overexpression of Zsig9. The gene sequence can be used as nucleic acid probes to detect RNA encoding Zsig9. The Zsig9 sequence facilitates improved diagnostic and therapeutic
                                                                                                                                                        Detecting tumors using antibodies, antagonists and antisense nucleotides to secretory protein-9 (Zsig9).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 techniques for detecting and treating dancers, especially of the brain,
liver, stomach, lymphoma etc., at an early stage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ó,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 182;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        83.1%; Score 369; DB 3; I
100.0%; Pred. No. 2.5e-37;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Search completed: May 8, 2006, 20:52:57 Job time : 189 secs
                                                                                                                                                                                                                                                                       Disclosure; Page 35; 45pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Local Similarity
Gest Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DGSQSVVEV 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 DGSQSVVEV 69
                                                               WPI: 2000-039447/03.
Moore EE, Taft DW;
                                                                                                   N-PSDB; AAZ08293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 182 AA;
```

THIS PAGE BLANK ATTE

GenCore version 5.1.8 Copyright (c) 1993 - 2006 Biocceleration Ltd.

OM protein - protein search, using sw model

May 8, 2006, 20:49:59; Search time 227 Seconds (without alignments) 257.968 Million cell updates/sec Run on:

US-10-716-824-2 444 1 MKGWGWLALLLGALLGTAWA......QSVVEVTVTVPPNKVAHSGF 83 Title: Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

2166443 seqs, 705528306 residues Searched:

2166443 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database :

UniProt_05.80:*
1: uniprot_sprot:*
2: uniprot_trembl:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description		Ogaxto mus musculu	Q6gpd6 xenopus lae							Q7ppm0 anopheles g			094re3 lithobius f			•	_	_	-								-			rhodopi	Q9kmz3 vibrio chol
SUMMARIES	QI	MSAP_HUMAN	MSAP_MOUSE	Q6GPD6_XENLA	Q4KLC8_XENLA	Q4SS46_TETNG	O5M7D4_XENLA	Q61L56_CAEBR	Q95QN1_CAEEL	QSV5F4_DROME	Q7PPM0_ANOGA	Q8XVW7_RALSO	Q67K51_SYMTH	Q94RE3_LITFO	PGES2_HUMAN	Q7Q4F3_ANOGA	Q9SM22_VANPL	Q7TXS8_MYCBO	P71633_MYCTU	PGES2_MOUSE	QSEK30_VIBCH	Q7UQK4_RHOBA	Q7QTC5_GIALA	Q8MQT9_GIALA	Q6T5L2_TAESO	Q926R8_LISIN			Q9FJQ0_ARATH	- 1	Q7UZB4_RHOBA	Q9KMZ3_VIBCH
	DB	ч	-	7	0	7	7	~	7	0	Ņ	~	7	0	1	N	7	7	~					0			0	0	~	N	7	7
	Query Match Length	182	182	184	184	184	181	192	193	189	187	146	327	299	377	238	335	375	375	384	595	731	353	1871	168	266	181	291	593	152	150	162
۵	Query	83.1	81.3	57.0	57.0	48.5	36.4	28.3	27.7	21.6	19.6	17.0	17.0	16.7	16.3	16.1	16.1	15.9	15.9	15.9	15.9	15.9	15.8	15.8	15.7	15.7	15.5	15.5	15.5	15.4	15.3	15.3
	Score	369	361	253	253	215.5	161.5	125.5	123	96	87	75.5	75.5	ACT	1		71.5	70.5	70.5	70.5	70.5	70.5	70	70	69.5	69.5	69	69	69	68.5	68	68
	Result No.	1	7	m	4	2	9	7	89	თ	.10	ŗ	12	13		15	16	17	18	19	20	21	22	23	24	52 *	56		28	59	30	31

099326 lithobius f QSE311 gallus gall QATTV2 tetracodon n QSGY25 idiomarina QBB280 thellungiel Q90044 macaca fasc QR351 listeria mo Q71vsl listeria mo Q5b1f2 aspergillus Q5e186 poteato mop- Q5ei86 poteato mop- Q5ei86 poteato mop- Q5leh7 bacteroides Q81uf5 bacillus an Q53mf0 oryza sativ
09G3Z6 LITFO 05F311_CHICK 04EWVZ_TETNG 05GVZ6_THEHA 06GSZ6_THEHA PGESZ_MACFA 06Y3JE_LISMO 071VS1_LISMO 071VS1_LISMO 05B1R7_EMENI 05B1R7_BACFN 05LBH7_BACFN 051UF5_BACAN 053MF0_ORYSA
000000000000000
311 789 821 236 337 317 413 566 616 105 105 1105
11000000000000000000000000000000000000
68 67 . 5 67 . 5 67 . 5 67 . 5 67 . 67
8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8

ALIGNMENTS

N

```
셤
                                                    g
                                                                                                                                  ò
                 TISSUE=EP, and Skin;

MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

M. Strausberg R.L., Felingold E.A., Grouse L.H., Derge J.G.,

Rausner R.D. Collins F.S., Wagner L., Schnemen C.M., Schuler G.D.,

Altechul S.F., Zeeberg B. Buetow K.H., Schaefer C.F., Bhat N.K.,

A Altechul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

M. Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

M. Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Rapleton M., Soares M.B., Forers G.J., Abramson R.D., Mullahy S.J.,

Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

Raba S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Brownstein M.J., Wickernan K.J., Malek J.A., Gunaratne P.H.,

Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

R.Yiklalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,

R. Pahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

R. Rodriguez A.C., Grimwood J., Schwutz J., Myers R.M.,

Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.B.,

R. Gehneration and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bloinformatics and the EMED utstation the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IsoId=Q9Y2B0-2; Sequence=VSP 010884, VSP_010885;
TISSUE SPECIFICITY: Expressed in different tissues. Highest levels
are detected in adult placenta, liver and pancreas.
SIMILARITY: Contains I saposin B-type domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).

-!- FUNCTION: Positive regulator of neurite outgrowth by stabilizing myosin regulatory light chain (WRLC). It prevents MIR-mediated MRLC ubiquitination and its subsequent proteasomal degradation.
-!- SUBJUNIT: Interacts with MYLIP/MIR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Prevents secretion from ER (Potential) PYARSEAHLTELLEE -> TVTVPPNKVAHSGFG (in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MIR-interacting saposin-like protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   83.1%; Score 369; DB 1; Length 182; 100.0%; Pred, No. 3.9e-32; ive 0; Mismatches 0; Indels
NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA] (ISOFORMS 1 AND 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BE726D302490733F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     isoform 2).
/FTId=VSP_010884.
Missing (In isoform 2).
/FTId=VSP_010885.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GO; GO: 0005887; C:integral to plasma membrane; TAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Event-Alternative splicing; Named isoforms=2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Saposin B-type.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IsoId=Q9Y2B0-1; Sequence=Displayed;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL, AB015631; BAA76498.1; -; mRNA.
EMBL, AY032624; AAK38148.1; -; mRNA.
EMBL, AY1591013; AAK01431.1; -; mRNA.
EMBL, AX15910.2; AAQ89460.1; -; mRNA.
EMBL, BC001027; AA4H01027.1; -; mRNA.
EMBL, BC065015; AAH65015.1; -; mRNA.
ENBL, BC065015; AAH65015.1; -; mRNA.
ENSEMBL; ENSG00000144785; HOMO SADIENS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Potential
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR000886; ER target S. InterPro; IPR0008139; SaposinB. PR005ITE; PS00014; ER TARGET; 1. PROSITE; PS50015; SAP B; 1. Alternative splicing; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        182 AA; 20652 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and mouse cDNA sequences.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HGNC; HGNC:13529; TMEM4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            175
182
84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 69; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MIM; 605861;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Name-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
SOLUTION TO THE SERVICE OF SOLUTION TO THE SERVICE OF S
```

ô

Gaps

ö

Conservative

```
RN 1012 SEQUENCE [LARGE SCALE MENA].

RC STRAIN=C57BL/61; TISSUE=Hippocampus, Pancreas, and Pituitary;

RX MIGLINE=C57BL/61; TISSUE=Hippocampus, Pancreas, and Pituitary;

RX MIGHINE=C57BL/61; TISSUE=Hippocampus, Pancreas, and Pituitary;

RX MIGHINE—C57BL/61; TISSUE=Hippocampus, Pancreas, and Pituitary;

RX Nikaido I., Osato N., Saito R., Suzuki H., Yamanaka I., Kiyosawa H.,

RX Badarelli R., Hill D.P., Bult C., Hume D.A., Chonbach C., Gojobori T.,

RX Balake J.A., Brade D., Brunst C., Hume D.A., Chochia C., Corbins S.,

RX Balake J.A., Fletcher C.F., Forrest R.W.,

RX Gasterland T., Gariboldi M., Gissi C., Godzik A., Gough J.,

RX Ganai A., Kawaji H., Kawasawa Y., Kedsierski R.M., King B.L.,

RX Kanai A., Kawaji H., Marchionni L., McKenzie L., Miki H.,

RX Konagaya A., Kurochkin I.V., Lee Y., Lenhard B., Lyons P.A.,

RX Konagaya A., Kurochkin I.V., Lee Y., Lenhard B., Lyons P.A.,

RX Kanai A., Schneider C., Seed D.J., Ramachandran S.,

RX Sandelin A., Schneider C., Sendin S., Ring B.Z., Ringwald M.,

RX Sandelin A., Schneider C., Sendin Y., Walls C.,

RX Sandelin A., Schneider C., Sendin W., Shimada W.,

RX Varardo R., Wapner L., Wahlestedt C., Wang Y., Watanabe Y., Walls C.,

RX Wilming L.G., Wynshaw-Boris A., Yanagiawa M., Yang I.,

RX Van Z., Zavolan M., Zhu Y., Zimmer A., Carninci P., Hayatsu N.,

RX Hara A., Hashizume W., Imotani K., Ishiadaw T., Fukuda S.,

RX Hara A., Hashizume W., Imotani K., Ishiadaw T., Konno M., Mararder E.,

RX Namichi A., Sakani K., Sabaki D., Shibata K., Shinadaw J.,

RX Namichi A., Sakani K., Sabaki D., Shibata K., Shinadaw J.,

RX Namichi A., Sakani R., Sabaki D., Shibata K., Shinadaw J.,

RX Namichi A., Sakani R., Sabaki D., Shibata K., Shinadaw J.,

RX Namichi A., Sakani R., Sabaki D., Shibata K., Shinadaw J.,

RX Namichi M., Sakaki D., Shibata K., Shinadaw J.,

RX Namichi M., Sakaki R., Sakaki D., Shibata K., Shinadaw J.,

RX Namichi M., Sakaki R., Sakaki D., Shibata K., Shibata J., Shibata J.
9
                                  1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nirney E., Hayashizaki Y.;
Analysis of the mouse transcriptome based on functional annotation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN=129; TISSUE=Mammary tumor; MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899; Straubberg R.L., Feingeld E.A., Grouse L.H., Derge J.G., Rlauener R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D., Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F., Diatchenko L., Marusina K., Farmer A.A, Rubin G.M., Hong L., Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                    MIR-interacting saposin-like protein precursor (Transmembrane protein 4) (Putative secreted protein ZSIG9). Name-Tmen4. Synonyms-Msap, Zsig9; Muse musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Merazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
Muroidea; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Yasunishi A., Yoshino M., Waterston R., Lander E.S., Rogers J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUCLEOTIDE SEQUENCE.
Sheppard P., Jelinek L., Whitmore T., Blumberg H., Lehner J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Mus musculus putative secreted protein.";
Submitted (SEP-1999) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                   25-OCT-2004 (Rel. 45, Last sequence update)
10-MAY-2005 (Rel. 47, Last annotation update)
                                                                                                                                                                                                                                                                                                     182 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
                                                                                                                                                                                                                                                                                                                                                            25-OCT-2004 (Rel. 45, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                          61 DGSQSVVEV 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=10090
                                                                                                                                                                                                                                                                                                        MSAP MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     O'Hara P.;
```

```
XENLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            අ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Frange C., Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J., Bosak S.A., McKeran R.J., McKernan K.J., Makek J.A., Gunzathe P.H., Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Hulyk S.W., Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Hulyk S.W., Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.B., Jones S.J.M., Marxa M.A.,
                                                                                                                                                                                                                                                                                               Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
-1- FUNCTION: Positive regulator of neurite outgrowth by stabilizing myosin regulatory light chain (MRLC). It prevents MIR-mediated MRLC ubiquitination and its subsequent protessomal degradation (By
                                                                                                                                                                                                                                                                                                                                                                                                                FUNCTION: Positive regulator of neurite outgrowth (By similarity). SUBUNIT: Interacts with MYLIP/MIR (By similarity). SIMILARITY: Contains 1 saposin B-type domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MKGWGWLALLLGVLLGTAWARRSQDLHCGACRALVDELEWEIARVDPKKTIQMGSFRINP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MIR-interacting saposin-like protein. Saposin B-type. Prevents secretion from ER (Potential). 83E54E7P01EE9B87 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ,
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Amphibia, Batrachia, Anura, Mesobatrachia, Pipoidea, Pipidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     81.3%; Score 361; DB 1; Length 182; 97.1%; Pred. No. 2.9e-31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; AF186115; AAF01433.1; -; mRNA.
EMBL; AK007914; BAB25346.1; -; mRNA.
EMBL; AK0107914; BAB25346.1; -; mRNA.
EMBL; AK013014; BAB28909.1; -; mRNA.
EMBL; AK019927; BAB1921.1; -; mRNA.
EMBL; AK019927; BAB31921.1; -; mRNA.
EMBL; AK019927; TAB31921.1; -; mRNA.
EMBL; MG19261; AAH08261.1; -; mRNA.
EMBL; MG1: 1928477; TMEM4.
GO; GO:0005615; C:extracellular space; TAS.
InterPro; IPR00886; ER Larget_S.
InterPro; IPR008139; SaposinB.
PROSITE; PS00014; ER_TARGET; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      184 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Potential
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Xenopus laevis (African clawed frog)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20 PO
182 MI
175 Sa
182 Pr
20767 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27,
27,
27,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Interpro, IPR008139, Saposi
PROSITE, PS00014, ER TARGET
PROSITE, PS50015, SAP_B; 1.
                                                                                                                                                                                                                                                                              and mouse cDNA sequences.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QGGPD6_XENLA PRELIMINARY;
QGGPD6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            05-JUL-2004 (TrEMBLrel. 2
05-JUL-2004 (TrEMBLrel. 2
05-JUL-2004 (TrEMBLrel. 2
MGC9474 protein.
Name=MGC80474;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    67; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 DGSQSVVEV 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           182 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DGSQSVVEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                               similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          removed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 XENLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Signal.
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
         RRAPA RRAPA PRAPA 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OSCHERE SOO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠ
```

```
TISSUE-Embryo;

WEDLINE-2238857; PubMed=12477932; DOI-10.1073/pnas.242603899;

A Klausherg R.L., Faingold E.A., Grouse I.H., Derge J.G.,

A Alteshuls.-F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Alteshul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Alteshul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

B Alteshul S.F., Jordan H., Moore T., Mars. I., Mang J., Heigh F.,

B Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

B Stapleton M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

R Atas S.A., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

B Boask S.A., McEwan P.J., McKernan K.J., Malek V.A., Gunaratne P.H.,

R Achards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Willalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

R Anderson M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Milting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

R Rodriguez A.C., Grimmood J.W., Green E.D., Dickson M.C.,

B Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

B Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

R Generation and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10 FLPIVLVSLVGYVCARRGODVHCGACRALVDELEWEISQVDPKKTIQKGSFRINPDGTQS 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINPDGSQS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=22341132; PubMed=12454917; DOI=10.1002/dvdy.10174;
Klein S.L., Strausberg R.L., Wagner L., Pontius J., Clifton S.W.,
Richardson P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Amphibia, Batrachia, Anura, Mesobatrachia, Pipoidea, Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Genetic and genomic tools for Xenopus research: The NIH Xenopus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     57.0%; Score 253; DB 2; Length 184; 74.6%; Pred. No. 2e-19; ive 9; Mismatches 7; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Klein S., Garhard D.S.;
Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.
EMBL; BC073204; AAH73204.1; -; mRNA.
InterPro; IPR000866; ER_target_S.
InterPro; IPR00139; SaposinB.
PROSITE; PS00014; ER_TARGET; UNKNOWN 1.
SEQUENCE 184 AA; 21039 FW; 1BDED5D398918E3E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13-SEP-2005 (TrEMBLrel. 31, Created)
13-SEP-2005 (TrEMBLrel. 31, Last seq
13-SEP-2005 (TrEMBLrel. 31, Last anno
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hypothetical protein.
Xenopus laevis (African clawed frog)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Xenopodinae; Xenopus; Xenopus.
Kenopodinae; Xenopus; Xenopus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dev. Dyn. 225:384-391(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and mouse cDNA sequences."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q4KLC8 XENLA PRELIMINARY;
Q4KLC8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity 74.6 tes 47; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUCLEOTIDE SEQUENCE.
                                                                                                      NUCLEOTIDE SEQUENCE
                              NCBI_TaxID=8355;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=8355;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WE 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VIE 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE=Embryo;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IISSUE=Embryo;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
```

```
Xenopodinae; Xenopus; Xenopus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Dev. Dyn. 225:384-391(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-FEB-2005 (TrEMBLrel. 29, 01-FEB-2005 (TrEMBLrel. 29, 01-FEB-2005 (TrEMBLrel. 29,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DSM7D4_XENLA PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUCLEOTIDE SEOUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity
Matches 46; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOC496234 protein.
Name=LOC496234;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            : ||
IREV 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 66 VVEV 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=8355;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE=Testis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         initiative.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DSM7D4 XENLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DDTTDDDTTDDDTTDDDTTDDDTTDDDTTDDDTTDDDTTDDDTTDDDTTDDDTTDDDTTDDDTTDDDTTDDDTTDDDTTDDDTTDDDTTDDDTTDDDTTDDDTTDDDTTDD
음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                 **X. Stausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Alteshul S.F., Zeeberg B., Buerow K.H., Schaefer C.F., Bhat N.K., Altechul S.F., Zeeberg B., Buerow K.H., Schaefer C.F., Bhat N.K., Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F., Datchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L., Stapleton M., Soares M.B., Bonaldo M.F., Carninci P., Prange C., Brownstein M.J., Usdin T.B., Tochiyuki S., Carninci P., Prange C., Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J., Abramson R.J., McKernan K.J., Malek J.J., Hulyk S.W., Abramson R., Ketteman M., Madan A., Sodergren E.J., Lu X., Gibbs R.A., Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., Abramson M.C., Abramson M.C., Abramson M.C., Abramson M.C., Schmutz J., Myers R.M., Schnetch A., Schein J.B., Jones S.J.M., Marra M.A.;

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Schnetch A., Schein J.B., Jones S.J.M., Marra M.A.;

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Schnetch A., Schein J.B., Jones S.J.M., Marra M.A.;

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Schnetch A., Schein J.B., Jones S.J.M., Marra M.A.;

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Schnetch A., Schein J.B., Jones S.J.M., Marra M.A.;

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Schnetch A., Schein J.B., Jones S.J.M., Marra M.A.;

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Schnetch A., Schein J.B., Jones S.J.M., Marra M.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10 FLPIVLVSLVGCVCARRGQDVHCGACRALVDELEWEISQVDPKKTIQKGSFHINPDGTQS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6 WLALLIGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINPDGSQS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tetraodon nigroviridis (Green puffer).

Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;

Actinopterygii, Neopterygii, Teleostei, Euteleostei, Neoteleostei,

Acanthomorpha, Acanthopterygii, Percomorpha, Tetraodontiformes;

Tetradontoidea, Tetraodontidae, Tetraodon.
                                             MEDLINE=22341132, PubMed=12454917; DOI=10.1002/dvdy.10174;
Klein S.L., Strausberg R.L., Wagner L., Pontius J., Clifton S.W.,
Richardson P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Jaillon O., Aury J.M., Brunet F., Petit J.L., Stange-Thomann N., Mauceli E., Bouneau L., Fischer C., Ozouf-Costaz C., Bernot A.,
                                                                                                                                                       Genetic and genomic tools for Xenopus research: The NIH Xenopus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         57.0%; Score 253; DB 2; Length 184;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. 2e-19;
9; Mismatches 8; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Klein S., Gerhard D.S.;
Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.
EMBL; BC099209; AAH99289.1; -; mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q4SS46_TETNG PRELIMINARY; PRT; 184 AA.
045S46_13.5EP-2005 (TrEMBLrel. 31, Created)
13-SEP-2005 (TrEMBLrel. 31, Last sequence update)
13-SEP-2005 (TrEMBLrel. 31, Last annotation update)
Chromosome 11 SCAF14479, whole genome shotgun sequence.
ORFNames=GSTENG00013614001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCB7184926917596 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          l protein.
184 AA; 21007 MW;
                                                                                                                                                                                                                                 Dev. Dyn. 225:384-391(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            73.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 Similarity 73.4
47; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mouse cDNA sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          [1]
NUCLEOTIDE SEQUENCE.
NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                             NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |:||
VIEV 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VVEV 69
                                                                                                                                                                                              initiative.",
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE=Whole/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hypothetical
                                                                                                                                                                                                                                                                                                                                       TISSUE=Whole
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ETNG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 5
1048846 TE
1048846 TE
10488 AC
```

용

ઠ a

ò

```
Nicaud S., Jaffe D., Fisher S., Lutfalla G., Dossat C., Segurens B., Dasilva C., Salanoubat M., Levy M., Boudet N., Castellano S., Anthouard V., Jubin C., Castelli V., Katinka M., Vacherie B., Blemont C., Skalli Z., Cattolico L., Poulain J., De Berardinis V., Cruaud C., Duprat S., Brottier P., Coutanceau J.P., Gouzy J., Parra G., Lardier G., Chapple C., McKerhan K.J., McEwan P., Bosak S., Kellis M., Volff JN., Guigo R., Zody M.C., Mesirov J., Lindblad-Toh K., Birren B., Nusbaum C., Kahn D., Robinson-Rechavi M., Lauder E.S., Weissenbach J., Roset Crollius H., Wincker P., Lander E.S., Weissenbach J., Roset Crollius H., "Genome duplication in the teleost fish Tetraodon nigroviridis reveals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE-Festis;

WEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
Hopkins R.F., Jordan H., Moorer T., Maxs S.I., Mang J., Hsieh F.,
Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
Brownstein M.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8 ALLLGALL--GTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINPDGSQS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Xenopus laevis (African clawed frog).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Amphibia, Batrachia, Anura, Mesobatrachia, Pipoidea, Pipidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE-2234_1132; PubMed=12454917; DOI=10.1002/dydy.10174;
Klein S.L., Strausberg R.L., Wagner L., Pontius J., Clifton S.W.,
Richardson P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genetic and genomic tools for Xenopus research: The NIH Xenopus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -1- CAUTION: The sequence shown here is derived from an EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is preliminary data.

BMBL; CARBO1014479; CAF65536.1; -; Genomic DNA.
SEQUENCE 184 AA; 20614 MW; 89CE0010ED99D9B9 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Э,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ch 48.5%; Score 215.5; DB 2; Length 184; l Similarity 71.9%; Pred. No. 2.5e-15; 46; Conservative 6; Mismatches 9; Indels 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUCLEOTIDE SEQUENCE.
Genoscope, Whitehead Institute Centre for Genome Research, Submitted (FEB-2004) to the EMBL/Genbank/DBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the early vertebrate proto-karyotype."; Nature 431:946-957(2004).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Created)
```

65 69

```
Hypothetical protein F01F1.15.
                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                      Q9V5F4
     셤
                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1;
                                                                                                                                                                                                                                                                                                                                                                59
Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
Mhiting M., Madan A., Young A.C., Shevchenko Y., Boulfard G.G.,
Blakeeley R.W., Touchman J.W., Green E.D., Dickson M.C.,
Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
"Generation and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                   7 LALLL--GALLGTAW-----ARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRI
                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota, Metazoa, Nematoda, Chromadorea, Rhabditida, Rhabditoidea,
Rhabditidae, Peloderinae, Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9 LLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINPDGSQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The C.briggsae Sequencing Consortium; Submitted (SEP-2003) to the EMBL/GenBank/DDBJ databases.
-!- CAUTION: The sequence shown here is derived from an EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1;
                                                                                                                                                                                                                                                                                                            6
                                                                                                                                                                                                                                                                                 DB 2; Length 181;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2; Length 192;
                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 125.5; DB 2; Length
Pred. No. 1.9e-05;
8; Mismatches 19; Indels
                                                                                                                                                                       TISSUE-TEBLLS.
Klein S., Gerhard D.S.;
Submitted (DEC-2004) to the EMBL/GenBank/DDBJ databases.
EMBL; BC088697; AAH88697.1; -; mRNA.
InterPro; IPR000886; ER target S.
PROSITE; PS00014; ER TARGET; UNKNOWN 1.
eronTRNCE 181 AA; Z0706 MW; B2B864IC5413F924 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hypothetical protein.
SEQUENCE 192 AA; 21152 MW; 619ADEC09CB411D5 CRC64;
                                                                                                                            Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                           6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAAC01000041; CAE64378.1; -; Genomic DNA.
                                                                                                                                                                                                                                                                                36.4%; Score 161.5; DB 54.5%; Pred. No. 2e-09; tive 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         192 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-OCT-2004 (TrEMBLrel. 28, Li
Hypothetical protein CBG09065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (TrEMBLrel. 19, (TrEMBLrel. 19, 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25-OCT-2004 (TrEMBLrel. 28, 25-OCT-2004 (TrEMBLrel. 28,
                                                                                                            mouse cDNA sequences.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QEILSE CAEBR PRELIMINARY;
Q61L56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q95QN1 CAEEL PRELIMINARY;
Q95QN1;
                                                                                                                                                                                                                                                                                            Local Similarity 54.5
les 36; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity 50.0 es 28; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Caenorhabditis briggsae.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             preliminary data.
                                                                                                                                                       NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                           :||| |
SPDGKO 65
                                                                                                                                                                                                                                                                                                                                                                                           NPDGSQ 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=6238;
                                                                                                                                                                      TISSUE=Testis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Name=CBG09065;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-DEC-2001 (
01-DEC-2001 (
01-OCT-2003 (
                                                                                                                                                                                                                                                                                                                                                                                           29
                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAEEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 8
Q95QN1 CA
ID Q95Q
AC Q95Q
DT 01-D
DT 01-O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                      ઠ
```

Last sequence update)
Last annotation update)

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROCESOTIOS SEQUENCE.

RA Adams M.D., Celniker S.E., Holt R.A., Bvans C.A., Gocayne J.D.,
Adamstides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
Adamstides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
RA Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champen M., Freiffer B.D.,
RA Barlew R.W., Basu A., Baxter B.G., Helt G., Nelson C.R., Miklos G.L.G.,
RA Abril J.F., Agbayani A., An H.-J., Andrews-Pfannkoch C., Baldwin D.,
RA Ballew R.W., Basu A., Baxter B.G., Helt G., Nelson C.R., Miklos G.L.G.,
RA Barlew R.W., Basu A., Baxter B.G., Helt G., Bolshakov S.,
RA Barlew R.W., Basu M., Baxter B.D., Bundari D., Bolshakov S.,
RA Borkova D., Botchan M.R., Bouck J., Brökstein P., Brottier P.,
RA Burtis K.C., Busam D.A., Buller H., Cadieu E., Center A., Chandra I.,
RA Borkova D., Bolcher A., Danja C., Davnes P.,
RA Gherry J.M., Cawley S., Dahlke C., Davemport L.B., Davies P.,
RA Goson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Godson K., Doup L.E., Downes M., Dugan-Rocha S., Plukov B.C., Dunn P.,
RA Godson K., Gong F., Gorrell J.H., Gu Z., Galar P., Harris M.,
RAlush F., Karlen G.H., Ke Z., Kennison J.A., Harris M.,
Ralush F., Karlen G.H., Ke Z., Kennison J.A., Harris M.,
Alali M., Kalush F., Karpen G.H., Ke Z., Kennison J.A., Harris N.L., Harvey D.A., Heiman T.J., Hernandez J.R., Hock D., Lei Y., Lei Y., Lei Y., Lei Y., Mattet B. McIntosh T.C., McLeod M.P., McCheron M.P., McCheron D.,
Rak Merkulov G., Milshina N.V., Modarry C., Morherson D.,
Rak Mount S.M., Moy M., Murphy B., Murphy E., Murphy D., Nelson D.L.,
Rak Mount S.M., Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
          Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea;
Rhabditidae; Peloderinae; Caenorhabditis.
NCBI_TaxID=6239;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Drosophila melanogaster (Fruit fly).
Bukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
                                                                                                                                                                                                            The C. elegans sequencing consortium; "Genome sequence of the nematode C. elégans: a platform for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 193;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                      investigating biology.";
Science 283:2012-2018(1998).
BMBL, U13070; AAK67223:1, -; Genomic_DNA.
Ensembl; FOLTI.15; Caenorhabditis elegans.
WormBase; WBGene00017169; F01F1.15.
Complete proteome; Hypothetical protein.
SEQUENCE 193 AA; 21112 MW; 072305588AF3C067 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Last annotátion update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24 LECGACSLLVTHFELKIAAVDPKKKIEVG9FRVSPTGDO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26 LHCGACRALVDELEWEIAQVDPKKTIQMGSFRINPDGSQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27.7%; Score 123; DB 2; 59.0%; Pred. No. 3.5e-05;
                                                                                                                              NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  189 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-MAY-2000 (TrEMBLrel. 13, Created)
01-MXY-2000 (TrEMBLrel. 13, Last seq
10-MXY-2005 (TrEMBLrel. 30, Last ann
CG12918-PA (GH10427p).
                                                                                                                                                      STRAIN-Bristol N2;
MEDLINE-99069613; PubMed=9851916;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q9V5F4_DROME PRELIMINARY;
Q9V5F4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
Caenorhabditis elegans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 23; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORFNames=CG12918;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=7227;
```

```
888888
                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
Palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G., Reinert K., Remington K., Saunders R.D.C., Scheeler F., Shen H., Shue B.C., Siden-Kiamos I., Simpson M., Skupski M.P., Smith T., Spiez B., Spradling A.C., Stapleton M., Strong R., Smith T., Svirskas R., Tector C., Turner R., Venter E., Wang A.H., Wang X., Wang A.Y., Wassaxman D.A., Weinstock G.M., Weissenbach J., Williams S.M., Woodeg T., Worley K.C., Wu D., Yang S., Yao Q.A., Ye J., Yeh R.-F., Zaveri J.S., Zhan M., Zhang G., Zhao Q., Zheng L., Zheng X.H., Zhong F.N., Zhong W., Zhou X., Zhu S., Smith H.O., The genome sequence of Drosophila melanogaster.";
                                                                                                                                                                                                                   NUCLECTIDE SEQUENCE.

NUCLECTIDE SEQUENCE.

NUCLECTIDE SEQUENCE.

Celniker S. B., Wheeler D.A., Krommiller B., Carlson J.W., Halpern A.,
Patel S., Adams M., Champe M., Dugan S.P., Frise E., Hodgson A.,
George R.A., Hoskins R.A., Laverty T., Muzny D.M., Nelson C.R.,
Patels J.M., Park S., Pfeiffer B.D., Richards S., Sodergren E.J.,
Svirskas R., Tabor P.B., Wan K., Stapleton M., Sutton G.G., Venter C.,
Weinstock G., Scherer S.E., Myers E.W., Gibbs R.A., Rubin G.M.;
"Finishing a whole-genome shotgun: release 3 of the Drosophila
melanogaster euchrcmatic genome sequence.",
Genome Biol. 3:RESEARCH0079-RESEARCH0079(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUCLEOTIDE SEQUENCE.
MEDLINE=22426070; PubMed=12537573;
Kaminker J.S., Bergman C.M., Kronmiller B., Carlson J.W., Svirskas R., Patel S., Frise E., Mheeler D.A., Lewis S.E., Rubin G.M., Ashburner M., Celniker S.E.;
"The transposable elements of the Drosophila melanogaster euchromatin:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MUCLEOTIDE SEQUENCE.
MEDLINE=22426069; PubMed=12537572;
Mistra S., Crosby M.A., Mungall C.J., Matthews B.B., Campbell K.S.,
Mistra S., Crosby M.A., Mungall C.J., Millburn G.H., Prochnik S.E.,
Smith C.D., Tupy J.L., Whitfield E.J., Bayraktaroglu L., Berman B.P.
Bettencourt B.R., Celniker S.E., de Grey A.D.N.J., Drygdale R.A.,
Harris N.L., Richter J., Russo S., Schroeder A.J., Shu S.Q.,
Stapleton M., Yamada C., Ashburner M., Gelbart W.M., Rubin G.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN-Berkeley;
Stapleton M., Brokstein P., Hong L., Agbayani A., Carlson J.,
Champe M., Chavez C., Dorsett V., Dresnek D., Farfan D., Frise E.,
George R., Gonzalez M., Guarin H., Kronmiller B., Li P., Liao G.,
Miranda A., Mungall C.J., Nunco J., Pacleb J., Paragas V., Park S.,
Patel S., Phouanenavong S., Wan K., Yu C., Lewis S.E., Rubin G.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Berkeley Drogophila Genome Project;
Celniker S., Carlson J., Wan K., Pfeiffer B., Frise E., George R.,
Hoskins R., Stapleton M., Pacleb J., Park S., Svirskas R., Smith B.
Yu C., Rubin G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Annotation of the Drosophila melanogaster euchromatic genome: a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P84051:H162A; NDEXD=1; IntAct=BBI-225746, EBI-182580;
EMBL; AE003831; AAF58856.1; -; Genomic_DNA.
EMBL; AV094688; AAM11051.1; -; mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Drosophila melanogaster release 4 sequence.";
Submitted (MAR-2000) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (MAR-2005) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a genomics perspective.";
Genome Biol. 3:RESEARCH0084.1-RESEARCH0084.20(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Genome Biol. 3: RESEARCH0083.1-RESEARCH0083.22 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Celniker S.;
```

```
ö
                                                                                                                                                                                                                  Ξ,
                                                                                                                                                                                                                  2; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Anopheles gambiae str. PEST.
Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Nematocera; Culicoidea; Culicidae;
Anophelinae; Anopheles.
NCBI_TaxID=180454;
                                                                                                                                                                                                                                                            8 ALLIGALIGTA--WARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINPDGS
                                                                                                                                                                                                                                                                                     8 ALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINPDG 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The Anopheles gambiae Sequence Committee,
Submitted (APR-2004) to the EMBL/GenBank/DDBJ databases.
-!- CAUTION: The sequence shown here is derived from an
EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is
preliminary data.
EMBL; AAAB01008944; EAA10213.3; -; Genomic_DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OrderedLocusNames=RSC2710; ORFNames=RSO0012;
Ralstonia solanacearum (Pseudomonas solanacearum).
Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales;
Burkholderiaceae; Ralstonia.
                                                                                                                                                           Match 21.6%; Score 96; DB 2; Length 189; Local Similarity 37.9%; Pred. No. 0.031; Loss 22; Conservative 13; Mismatches 21; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19.6%; Score 87; DB 2; Length 187; 32.7%; Pred. No. 0.3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Anopheles gambiae re-annotation.";
Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases.
Ensembl; CG12918; Drosophila melanogaster.
FlyBase; FBGN0033477; CG12918.
InterPro; IPR000886; Extraget_S.
InterPro; PPR00139; SaposinB.
PROSITE; PS0014; Ex TARGET; UNKNOWN 1.
SEQUENCE 189 AA; Ž1301 MW; 7543184AÈ979DEB0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  187 AA; 21394 MW; 98396CE5EC4D767D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-MAR-2004 (TrEMBLrel. 26, Created)
01-MAR-2004 (TrEMBLrel. 26, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
ENSANGPO000013093 (Fragment).
ORFNames=ENSANGG0000010604;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-WAR-2002 (TrEMBLrel. 20, Created)
01-WAR-2002 (TrEMBLrel. 20, Last sequence update)
01-WAR-2004 (TrEMBLrel. 26, Last annotation update)
PROBABLE LIPOPROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity 32.7%; Pred. No. 0.3;
Matches 18; Conservative 14; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN-PEST;
The Anopheles gambiae Sequence Committee;
                                                                                                                                                                                                                                                                                                                                                                                                                               Q7PPMO_ANOGA PRELIMINARY;
Q7PPMO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QEXVW7 RALSO PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN-PEST;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NON TER
NON TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CWVW7
                                                                                                                                                                                            Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 11
Q8XVW7 RAL
                                                                                                                                                                                                                                                                                                                                                                                   RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SXCOSS GETTT AND
```

```
HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       form]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 14
                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ω,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            208 GWRWADPLAGLLVAALIARTAWSIGSEAAHMLMDGFADRARIAALEEVVLGVQGVTGVQ- 266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8 WTAALMG--LGVCACAIAQDIPVGTCRPMVGQ-----AEIDGVMQQVSGTACLQPDGTWQ 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3 GWGW----LALLLGALLG-TAWARRSQDLHC----GACRALVDELEWEIAQVDPKKTIQM 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6 WLALLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINPDGSQS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN=IAM14863;

STRAIN=IAM14863;

A PubMed=1538646; DOI=10.1093/nar/gkh810;

A Morimura K., Yamashita A., Ishikawa J., Shimada M., Watsuji T.,

Udda K., Yamashita A., Ishikawa J., Shimada M., Watsuji T.,

Morimura K., Ikeda H., Hattori M., Beppu T.;

"Genome sequence of Symbiobacterium thermophilum, an uncultivable

T mach depends on microbial commensalism.";

Nucleic Acids Res. 32.4937-4944(2004).

EMBL; AP006840; BAD41947.1; -; Genomic_DNA.

GO: 00:0006812; P:cation transporter activity; IEA.

R GO: GO:0006812; P:cation transport; IEA.

R GO: GO:0006812; P:cation transport; IEA.

R InterPro; IPR00254; Cation efflux.

R Ffan; PF0145; Cation efflux;

R TIGRRAMS; IIGR01297; GDF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                      NEDLINGE-21681879; PubMed=11823852; DOI=10.1038/415497a;
Salanoubat M., Genin S., Artiguenave F., Gouzy J., Mangenot S.,
Arlat M., Billault A., Brottier P., Camus J.C., Cattolico L.,
Chandler M., Choisne N., Claudel-Renard C., Cunnac S., Demange N.,
Gaspin C., Lavie M., Moisan A., Robert C., Saurin W., Schiex T.,
Siquier P., Thebault P., Whalen M., Wincker P., Levy M.,
"Genome sequence of the plant pathogen Ralstonia solanacearum.";
"Genome sequence of the plant pathogen Ralstonia solanacearum.";
EMBL; AL646071; CAD16417.1; -; Genomic_DNA.
Complete protecome; Lipoprotein.
SEQUENCE 146 AA; 15350 MW; 784620C8F060D589 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13;
                                                                                                                                                                                                                                                                                                                                                                                                                    17.0%; Score 75.5; DB 2; Length 146; 28.6%; Pred. No. 4.2; ive 14; Mismatches 28; Indels 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17.0%; Score 75.5; DB 2; Length 327; 35.8%; Pred. No. 9.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    32; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEOUENCE 327 AA; 34193 MW; 3EICD40918B6097B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25-0CT-2004 (TrEMBLrel. 28, Created)
25-0CT-2004 (TrEMBLrel. 28, Last sequence update)
25-0CT-2004 (TrEMBLrel. 28, Last annotation update)
25-0CT-2004 (TrEMBLrel. 28, Last annotation update)
25-0CT-2004 (TrEMBLrel. 28, Last annotation update)
CorderedLocusNames=STR2964;
Symbiobacterium thermophilum.
Bacteria: Actinobacteria; Symbiobacterium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           327 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             267 -SLRARLMGSRVHVDVTVLVP 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            54 GSFRINPDGSQSVVEVTVTVP 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        66 UVEVTVTVPPNKVAHSG 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 MADGTT-----VAYAG 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OG7K51_SYMTH PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 28.6
Matches 22; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29; Conservative
  NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUCLEOTIDE SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=2734;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 12
96785
AC 06785
AC 06785
AC 06785
AC 06785
AC 06785
AC 25-OC
DT 25
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
```

RESULT 13

```
WICLEOTIDE SEQUENCE.

WEDLINE=21441907; PubMed=11557978; DOI=10.1038/35093090;

WEDLINE=21441907; PubMed=11557978; DOI=10.1038/35093090;

WEDLINE=21441907; PubMed=11557978; DOI=10.1038/35093090;

WEDLINE=21441907; PubMed=11557978; DOI=10.1038/35093090;

WEDLINE=2141907; Pricedich M., Choe C., Kim W.;

Wittochondrial protein phylogeny joins myriapods with chelicerates.";

WEDLINE-157(2001).

REMBL; AJ270997; CAC69948-1; -; Genomic_DNA.

REMBL; AJ270997; Cintegral to membrane; IEA.

RO; GO:0016021; Cintegral to membrane; IEA.

RO; GO:0016021; F:NADH dehydrogenses (ubiquinone) activity; IEA.

RO; GO:0016491; F:oxidoreductase activity; IEA.

RO; GO:001646; MaDHdh; I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98 GWLYFLSFIAVSVYAIIGSGWPSNSKYALLGALRAVAQTISYEVCLAMVIIMLMVSVGSF 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PGES2 HUMAN STANDARD; PRT; 3<sup>†</sup>7 AA.
09H72<sup>†</sup>1, 0358M9<sup>†</sup>, 05SY06<sup>†</sup>, 09GGIO<sup>‡</sup>;
13-SEP-2005 (Rel. 48, Created)
13-SEP-2005 (Rel. 48, Last sequence update)
13-SEP-2005 (Rel. 48, Last annotation Update)
13-SEP-2005 (Rel. 48, Last annotation Update)
Prostaglandin E synthase-2 (EC 5.3.99.3) (Microsomal prostaglandin E synthase-2) (Condains: Prostaglandin E synthase-2, truncated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 GW----GWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEI--AQVDPKKTIQMGSF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE=Embryo;
PubMed=14702039; DOI=10.1038/ng1285;
PubMed=14702039; DOI=10.1038/ng1285;
PubMed=14702039; DOI=10.1038/ng1285;
PubMed=14702039; DOI=10.1038/ng1285;
Wakamatsu A., Hayashi K., Sato H., Nagai K., Kimura K., Makita H., Sekine M., Obayashi M., Nishi T., Shibahara T., Tanaka T., Ishii S., Yamamoto J.-I., Saito K., Kawai Y., Isono Y., Nakamura Y., Naganti K., Yanada T., Isono Y., Wagatsuma M., Nagahari K., Yanada T., Isanada T., Kaku Y., Kodaira H., Kondo H., Sugawara M., Takahashi M., Kanda K., Yokoi T., Furuya T., Kikkawa E., Omura Y., Abe K., Kamihara K., Katsuta N., Sato K., Tanikawa M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . 9
                                                                                                                                                                                                                                                                Eukaryota, Metazoa, Arthropoda, Myriapoda, Chilopoda,
Pleurostigmophora, Lithobiomorpha, Lithobiidae, Lithobius.
NCBI_TaxID=7552;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 299;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       299 AA; 33719 MW; 0927CDD/57ED7878 CRC64;
                                                     01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
NADH dehydrogenase subunit 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16.7%; Score 74; DB 2;
28.6%; Pred. No. 13;
tive 15; Mismatches 2.
299 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE; PS00667; COMPLEX1_ND1_1; 1.
PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Name=PTGES2; Synonyms=PGES2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best_Local Similarity 28.6%
Matches 18; Conservative
LITFO PRELIMINARY;
                                                                                                                                                                                                          forficatus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       158 NLN 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              57 RIN 59
                                                                                                                                                                                                                                          Mitochondrion.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mitochondrion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                               094RE3
```

ω

R. Pubbed=15164053; DOI=10.1038/nature02465; Hunt S.R., Scott C.E., Jones M.C., R. Humphray S.J., Oliver K., Hunt A.R., Plumb R.W., Loveland J.E., Humphray S.J., Oliver K., Hunt A.R., Plumb R.W., Loveland J.E., Andrews T.D., Searle S., Hunt S.R., Scott C.E., Jones M.C., Annecough R., Almeida J.P., Ambrose K.D., Sahubi B.E., Gortt C.E., Jones M.C., Annecough R., Babbage A.K., Barchan J.Y., Clee C.M., Cleep S., Collier R.E., Corby N., Cleep R. Brach D. C., Carter N.P., Chapman J.C., Chen Y., Clarke G., Cummings A.T., Davies J., Dhami P., Dunn M., Dutta I., Dyer L.W., Fricker D.G., Garner P., Garnett J., Rathfiths Jones S., Grocock R., Gavy J., Hall R.E., Almond S., Harley J.L., Harrison E.S.I., Hart E.A., Heath P.D., Henderson C.J. Hopkins B.L., Howard P.J., Howden P.J., Huckle E., Achnson C.J., Hopkins B.L., Howard P.J., Howden P.J., Huckle E., Achnson C.J., Hopkins B.L., Howard P.J., Howden P.J., McLaren S., Knights A., Kay M., Lovell J.J., McLaren S., Mashreghi. Mohammadi M., Matthews L., McLarey A.M., Maxthews L., McMarrey A., Milne S., Nickerson T., Nisbett J., McLarey A., Forward S., Phillimore B., Povey S., Ramsey Y., Rand V., Scharfe M., Scharfe M., Scharfe M., Scharfe M., Scharfe M., Scharfe M., Williams S.A., Wilmig L., Wray P.W., Rackey A., Tromans A., Thomas D.W., Wall M., Wallis J.M., Weller A., Sulston J.E., Williams S.A., Wilming L., Williams S.A., Wilming L., Williams S.A., Wilming L., McMursy A., Nahurston M., Blocker H., Durbin R., Nahurston C., Durbson M.J., Bentley D.K., Markey M., Nahurston M., Bentley D.K., Markey M., Nahurston M., Bentley D.K., Williams S., Wilmin Yamazaki M., Ninomiya K., Ishibashi T., Yamashita H., Murakawa K., Ishidas., Ono Y., Takiguchi S., Watanabe M., Hiraoka S., Chiba Y., Ishidas., Ono Y., Takiguchi S., Watanabe S., Yosida M., Hotuta T., Kusano J., Kanehori K., Takahashi-Fujil A., Hara H., Tanase T.-O., In Masahino K., Yuuki H., Oshima A., Sasaki N., Aoceuka S., Impashino K., Yuuki H., Oshima A., Sasaki N., Aoceuka S., Momiyama H., Satoh N., Takami S., Terashima Y., Sano S., Momiyama H., Satoh N., Takami S., Terashima Y., Sano S., Sanoh A., Mizoguchi H., Goto Y., Shimizu F., Wakebe H., Hishigaki H., Watanabe T., Sujyama A., Itakura S., Fukuzumi Y., Kamayama M., Tashiro W., Takemoto M., Kawakami B., Yamazaki M., Watanabe K., Kumagai A., Itakura S., Fukuzumi Y., Kumayama M., Tashiro H., Tanigami H., Fujiwara T., Ono T., Yamaa K., Fujii Y., Ocaki K., Hirao M., Ohmori Y., Kawabata A., Hikiji T., Kobatake N., Inagaki H., Ikema Y., Okamoto S., Okitani R., Nakajima Y., Mizuno T., Shigeta K., Senba T., Matsumura K., Nakajima Y., Mizuno T., Morinaga M., Sasaki M., Togashi T., Oyama M., Hata H., Watanabe M., Komatsu T., Adashira R., Nakamura N., Nakamura N., Kakuchi R., Yada T., Nomura N., Kakuchi R., Yada T., Nomura N., Kakuchi R., Yada T., Nakamura N., Ohama O., Isogai T., Sugano S., Makai K., Yada T., Nakamura N., Ohama O., Isogai T., Sugano S., Makai K., Yada T., Nakamura N., Ohama O., Isogai T., Sugano S., Makai K., Yada T., Nakamura N., Ohama O., Isogai T., Sugano S., Makai K., Yada T., Nakamura N., Ohama O., Isogai T., Sugano S., Makai K., Yada T., Nakamura O., Isogai T., Sugano S., Makai K., Yada T., Nakamura O., Isogai T., Sugano S., Makai K., Yada T., Nakamura O., Isogai T., Sugano S., Makai K., Yada T., Nakamura O., Isogai T., Sugano S., Makai K., Yada T., Nakamura O., Isogai T., Sugano S., Makai K., Yada T., Nakamura O., Isogai T., Sugano S., Makai K., Yada T., Nakamura O., Isogai T., Sugano S., Makai K., Yada T., Nakamura O., Isogai T., Sugano S., Makai K., Yada T., Nakamura V., Ohama O., Isogai T., Sugano S., Makai K., Ohama O., Isogai T., Oha TISSUE-Brain, and Lung;
MEDLINES-2388B57; Dubmed-12477932; DOI-10.1073/pnas.242603899;
Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
Stapleron M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J., NUCLEOTIDE SEQUENCE (LARGE SCALE MRNA). Totoki Y., Toyoda A., Takeda T., Sakaki Y., Tanaka A., Yokoyama S.; Submitted (APR-2005) to the EMBL/GenBank/DDBJ databases. NUCLEOTIDE SEQUENCE (LARGE SCALE GENOMIC DNA). NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA]. Genet. 36:40-45(2004). Nature 429:369-374(2004).

The Factorian with Excellent and the following the following state of the following following the following following the following foll Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., Richards S., Worley K.C., Hale S., Garcla A.M., Gay L.J., Hulyk S.W., Villadon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Fahey J., Helton E., Ketteman M. Madan A.Y., Rodrigues S., Sanchez A., Whiting M., Madan A.C., Shevchenko Y., Bouffard G.G., Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E., Schein J.E., Jones S.J.M., Marra M.A., PubMed=12835322; DOI=10.1074/jbc.M305108200; Murakami M., Nakashima K., Kamei D., Masuda S., Ishikawa Y., Ishii T., Ohmiya Y., Watanabe K., Kudo I.; "Cellular prostaglandin E2 production by membrane-bound prostaglandin E synthase-2 via both cycloxygenases-1 and -2."; J. Biol. Chem. 278:37937-37947(2003). 'Essential 110Cys in active site of membrane-associated prostaglandin "Identification and characterization of a novel type of membrane-Pubмed=12804604; Watanabe K., Ohkubo H., Niwa H., Tanikawa N., Koda N., Ito S., PubMed=11866447; DOI=10.1006/bbrc.2002.6531; Tanikawa N., Ohmiya Y., Ohkubo H., Hashimoto K., Kangawa K., Kojima M., Ito S., Watanabe K.; Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002). Biochem. Biophys. Res. Commun. 306:577-581(2003). associated prostaglandin E synthase."; Biochem. Blophys. Res. Commun. 291:884-889(2002) AND MUTAGENESIS OF CYS-110 AND CYS-113 AND SUBCELLULAR LOCATION. cDNA sequences." INTERACTION WITH EXOSCIO. TISSUE SPECIFICITY. E synthase-2 Ohmiya Y.; and mouse CLEAVAGE.

This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its lung. Overexpressed in colorectal cancer.
SINILARITY: Belongs to the GST superfamily.
CAUTION: Ref.3 (CAL11822) sequence differs from that shown due to erroneous gene model prediction. -i-SUBCELULIAR LOCATION: Membrane-bound and soluble. Synthetized as Golgi membrane-bound protein, which is further cleaved into the predominant soluble truncated form. The truncated form is cytoplasmic and is enriched in the perinuclear region.
-i-TISSUB SPECIFICITY: Widely expressed. Expressed in the heart, including apex, inter-ventricular septum, both atria and ventricles, but not in the aorta. Also expressed in fetal heart. Detected in various regions of the brain: cerebellum; occipital, frontal and pariantal lobes. Also expressed in the lymph nodes, skeletal muscle, kidney and trachea, but not in the thymus or

```
as long as its content is in no way modified and this statement is not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAAALALGGALGLYHTARWHLRAQDLHAERSAAQLSLSSRLQLTLYQYKTCPFCSKVRAF 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5 GWLALLLGALLG----TAWARRSQDLH----------------CGACRAL 34
                                                                                                                                                                HONC: HGNC: 1, c. ...

HONC; HGNC: 1, c. ...

R InterPro; IPR011336; Thioredoxin-like.

R InterPro; IPR012336; Thioredoxin fold.

R InterPro; IPR012335; Thioredoxin fold.

RW Fatty acid biosynthesis; Isomerase; Lipid synthesis;

KW Prostaglandin blosynthesis; Transmembrane.

FT CHAIN 88 377 Prostaglandin E synthase-2.

FT CHAIN 89 377 Prostaglandin E synthase-2.

FT Lumenal (Potential).

Lumenal (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Anopheles gambiae str. PEST.

Bukaryota, Metazoa, Arthropoda, Hexapoda, Insecta; Pterygota,
Neoptera, Endopterygota, Diptera, Nematocera, Culicoidea, Culicidae,
Anophelinae, Anopheles.

NCBI_TaxID=180454;
                                                                                                                                                                                                                                                                                                                                                                                                         Cleavage (By similarity).
C->S: Loss of function.
C->S: Does not strongly affect enzyme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The Anopholes gambiae Sequence Committee,
Submitted (APR-2004) to the EMBL/GenBank/DDBJ databases.
-!- CAUTION: The sequence shown here is derived from an
EMBL/GenBank/DDBJ whole genome shotgun (WGS) entry which is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            :| | ::::|:| : |:| : |:| : | | | LDFHALPYQVEVNEVNERAEIKFSSYRKVPILVAQEGESSQQLNDSSVII 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          35 VD--ELEWEIAQVDP--KKTIQMGSFRINP-----DGSQSVVEVTVTV 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 1; Length 377;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16.3%; Score /2...
24.5%; Pred. No. 24;
.*ive 15; Mismatches 27; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Anopheles gambiae re-annotation.";
Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-WAR-2004 (TrEMBLrel. 26, Created)
01-WAR-2004 (TrEMBLrel. 26, Last sequence update)
01-WAR-2004 (TrEMBLrel. 26, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  preliminary data.

EMBL; AAAB01008964; EAA12497.2; -; Genomic_DNA.

GO; GO:0004182; F:carboxypeptidase A activity; IEA.

GO; GO:0004180; F:carboxypeptidase activity; IEA.
                                                                        EMBL; ALS90708; CAI13821.1; -; Genomic DNA.
EMBL; ALS90708; CAI13822.1; ALT_SEQ; Genomic_DNA.
EMBL; BC003397; AAH09397.2; -; mRNA.
EMBL; BC009456; AAH09456.1; -; mRNA.
EMBL; BC011613; AAH11613.1; -; mRNA.
ENSG00000148334; Homo sapiens.
HGNC; HGNC:17822; PTGES2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         238 AA
                                        EMBL; AK024100; BAB14826.1; -; mRNA.
EMBL; AK223520; BAD97240.1; -; mRNA.
EMBL; AL590708; CAI13821.1; -; Genomic_DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The Anopheles gambiae Sequence Committee;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ENSANGP0000019554 (Fragment).
ORFNames=ENSANGG0000017065;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q7Q4F3 ANOGA PRELIMINARY;
Q7Q4F3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity 24.5
nes 27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      [2]
NUCLEOTIDE ŚEQUENCE.
STRAIN=PEST;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUCLEOTIDE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN=PEST;
                                                                                                                                                                                                                                                                                                                                                       TRANSMEM
TOPO DOM
ACT SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                  removed
                                                                                                                                                                                                                                                                                                                                                                                                                         MUTAGEN
                                                                                                                                                                                                                                                                                                                                                                                                                                            MUTAGEN
유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
```

```
62
                                                                                                                                                                                                                                                                                                                           53
                                                                                                                                                                                                                                                                                          4 WGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDFKKTIQMGSFRINPDG-
                                                                                                                                                                                                                                                                                                                           2 WFKLTLLLVAAI -- AWGGSAEQARFDNYRVYEVSIETE----RQLKTLQ--HLELNPDGY
                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                        Indels 15;
                                                                                                                                                                                                                     DB 2; Length 238;
GO, GO:0008237, F:metallopeptidase activity, IEA.
GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
InterPro; IPR00384; Peptidase M14.
InterPro; IPR003146; Prot inh M14A.
Pfam; PF02246; Peptidase M14; 1.
Pfam; PF02244; Propep M14; 1.
PRINTS; PR00751; Zn Peptidase M14; 1.
PROSITE; PS00132; CRBOXYPFASEA.
SMART; SM0031; Zn Pepti 1.
PROSITE; PS00132; CARBOXYPEPT ZN 1; 1.
                                                                                                                                                                                    SEQUENCE 238 AA; 27402 MW; C624E6CFF99E69DF CRC64;
                                                                                                                                                                                                                                                       32;
                                                                                                                                                                                                                 16.1%; Score 71.5; DB
29.8%; Pred. No. 19;
Live 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                               63 -----SQSVVEVTVPPNKVAH 80
                                                                                                                                                                                                                                                                                                                                                                                              77
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Search completed: May 8, 2006, 20:56:50 Job time : 230 secs
                                                                                                                                                                                                                                                                                                                                                                                   Best_Local Similarity 29.8%
Matches 25; Conservative
                                                                                                                                                                                                                     Query Match
     g
                                                                                                                                                                                                                                                                                                                                                           à
```

THIS PAGE BLANK (USPTO)

GenCore version 5.1.8 Copyright (c) 1993 - 2006 Biocceleration Ltd.

OM protein - protein search, using sw model

May Run on:

8, 2006, 20:53:15 ; Search time 38 Seconds (without alignments) 210.158 Million cell updates/sec

US-10-716-824-2

Perfect score: Sequence:

1 MKGWGWLALLLGALLGTAWA.....QSVVEVTVTVPPNKVAHSGF

83

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

283416 segs, 96216763 residues Searched:

283416 Total number of hits satisfying chosen parameters:

seq length: 0 seq length: 200000000 88 Minimum I Maximum I

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

PIR 80:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:* Database

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	hypothetical prote	hypothetical prote	Sucrose phosphoryl	hypothetical prote	hypothetical prote	υ	Sucrose phosphoryl	unknown protein [i	alpha-mannosidase	hypothetical prote	NADH2 dehydrogenas			NADH2 dehydrogenas	probable galactino	lactose transport	hypothetical prote	heat shock protein	heat shock protein	catalase (EC 1.11.	genome polyprotein	probable integral	hypothetical prote	antigen (clone 22)	hypothetical prote	heat shock protein	<u>u</u>	brain-specific kin	receptor-like tyro
SUMMARIES	ID	1	F70691				JC7977	·	·		G84341				A34284				_		875113		T34640	AE2359		G87451	AD0728	T153	I489	851603
	DB	}					7																							N
	Length	580	375	995	181	162	377	413	233	1040	185	325	322	323	323	335	425	528	293	293	754	3175	151	308	98	281	293	440	877	893
de	Query	27.7	15.9	15.7	15.5	15.3	15.2	15.2	14.8	٠	14.5	14.5	٠	14.3	14.3	14.3	14.3	14.3	14.2	14.2			14.1	14.1	14.0	14.0	14.0	14.0	14.0	14.0
	Score	· ~	70.5		69	68	67.5	67.5	65.5	65.5	64.5	64.5	63.5	63.5	63.5	63.5	۳.		63	63	63	63	62.5	62.5	62	62	62	62	62	62
	Result No.	П	8	m	4	ß	9	7	c c	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	1 24	25	56	27	28	- 29

receptor tyrosine	receptor-like tyro	receptor tyrosine	hypothetical prote	microfibril-associ	Jun activation dom	constitutive photo	alpha-mannosidase	hypothetical prote	water channel prot	hypothetical prote	transcription term	hypothetical prote	cation-transportin	tRNA nucleotidyltr	coenzyme pqq synth
S47489	S51604	S49015	C75403	B56745	C86363	T52180	T46931	T26774	JT0750	T23239	S52274	T28795	AH3258	QQECPE	B75052
~	N	~	N	~	N	~	н	0	~	~	-	~	7	Н	0
868	981	1005	216	175	357	357	1040	1801	271	296	387	407	813	238	254
14.0	14.0	14.0	13.9	13.7	13.7	13.7	13.7	13.7	13.6	13.6	13.6	13.6	13.6	13.5	13.5
62	62	62	61.5	61	61	61	61	61	60.5	60.5	60.5	60.5	60.5	9	9
30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45

ALIGNMENTS

Н	
Ę	a
Ы	4
	σ
Š	
ш	-

hypothetical protein F01F1.11 - Caenorhabditis elegans

C'Species: Caenorhabditis elegans C'Date: 20-Sep-1999 #sequence_revision 20-Sep-1999 #text_change 24-Nov-1999 C'Accession: T15949 R'Miller, N. submitted to the EMBL Data Library, July 1995 A'Description: The sequence of C. elegans cosmid FOIF1.

A;Accession: T15949

A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Rocaule type: DNA
A;Residues: 1-580 <MIL>
A;Cross-references: UNIPARC:UPI0000179068; ÉMBL:U13070; NID:G529697; PID:G529708; PIDN:A.
A;Experimental source: strain Bristol N2

C;Genetics:

A;Gene: CESP:F01F1.11 A;Introns: 66/1; 144/3; 199/3; 269/1; 330/2; 387/2; 415/1; 481/3; 514/3 C;Superfamily: Caenorhabditis elegans hypothetical protein F01F1.11

Query Match

ö Match 27.7%; Score 123; DB 2; Length 580; Local Similarity 59.0%; Pred. No. 8.5e-06; les 23; Conservative 5; Mismatches 11; Indels Best Loc Matches

ö

Gaps

64 26 LHCGACRALVDELEWEIAQVDPKKTIQMG9FRINPDGSQ 셤 ð

hypothetical protein Rv2819c - Mycobacterium tuberculosis (strain H37RV)
C;Species: Mycobacterium tuberculosis
C;Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 09-Jul-2004
C;Accession: F70691
S;Ole, S.T; Brosch, R.; Parkhill, J.; Gardier, T.; Churcher, C.; Harris, D.; Gordon, S.; Connor, R.; Davies, R.; Devlin, K.; Feltwell, T.; Gentles, S.; Hamlin, N.; Holroyd, S. Rajandream, M.A.; Rogers, J.; Rutter, S.; Søeger, K.; Skelton, S.; Squares, S.
Nature 333, 537-544, 1998
A;Authors: Sqares, R.; Sulston, J.E.; Taylor, K.; Whitehead, S.; Barrell, B.G.
A;Title: Deciphering the biology of Mycobacterium tuberculosis from the complete genome A;Reference number: A70501, MUID:98295987; PMID:9634230
A;Accession: F70691
A;Accession: F70691
A;Status: preliminary; nucleic acid sequence not shown; translation not shown

A;Residues: 1-375 <COL> A;Cross-references: UNIPROT:P71633; UNIPARC:UPI0000D0F90; GB:Z81331; GB:AL123456; NID:g A;Experimental source: strain H37Rv

C;Genetics: A;Gene: Rv2819c

N

```
Riffeidelberg, J.F.; Elsen, J.A.; Nelson, W.C.; Clayton, R.A.; Gwinn, M.L.; Dodson, R.J.; chardson, D.; Ermolaeva, M.D.; Vamathevan, J.; Bass, S.; Qin, H.; Dragoi, I.; Sellers, P. I., R.R.; Mekalanos, J.J.; Venter, J.C.; Fraser, C.M.
Nature 406, 477-483, 2000
A;Title: DNA Sequence of both chromosomes of the cholera pathogen Vibrio cholerae.
A;Reference number: A82035; WUID:20406833; PMID:10952301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C;Species: Homo sapiens (man)
C;Date: 25-Aug-2003 #sequence_revision 25-Aug-2003 #text_change 15-Sep-2003
C;Accession: JC7977; PC7227
R;Watanabe, K;Ohkubo, H.; Niwa, H.; Tanikawa, N.; Koda, N.; Ito, S.; Ohmiya, Y.
Biochem. Biophys. Res. Commun. 306, 577-581, 2003
A;Title: Essential 110Cys in active site of membrane-associated prostaglandin E synthase-A;Reference number: JC7977; PMID:12804604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Molecule type: protein
A;Residues: 88-109 <WA2>
C/Comment: This enzyme, which has a broad specificity in its thiol requirement for a cat.
r. Its essential 110Cys plays an important role in the catalysis.
C;Keywords: mPGE synthase-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Cross-references: UNIPROT: Q9XMZ3; UNIPARC: UPI00000C345B; GB: AE004357; GB: AE003853; NID A; Experimental source: serogroup O1; strain N16961; blotype El Tor
                                                                                                                                                                                                                                                           hypothetical protein VCA0173 [imported] - Vibrio cholerae (strain N16961 serogroup O1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60 GAAALALGGALGLYHTARWHLHAQDLHAERSAVQLSLSSRLQLTLYQYKTCPFCSKVRAF 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  27 WGWWASLAGILIVMLIIGLAVRWHRR----------RLAPKKTALRILS 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ----- 34
     -----WQVSDLPAAQPGQAGAGQRQRAV 60
                                                                                                                                                                                                                                                                                                                       C;Date: 18-Aug-2000 #sequence_revision 20-Aug-2000 #text_change 09-Jul-2004
C;Accession: F82493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4 WGWLALLLGAL-----LGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKT-IQMGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        41; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          membrane-associated prostaglandin E synthase (EC 5.3.99.3) -2 - human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          35 VD--ELEWEIAQVDP--KKTIQMGSFRINP-----DGSQSVVEVTV 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2; Length 377;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 15.3%; Score 68; DB 2; Length 162; Best Local Similarity 24.4%; Pred. No. 3.2; Matches 22; Conservative 10; Mismatches 24; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ch 15.2%; Score 67.5; DE
1 Similarity 23.6%; Pred. No. 8.9;
26; Conservative 15; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              56 FRINPDGSQSVVEVT----VTVPPNKVAH 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GWLALLLGALLG----TAWARRSQDLH----
        10 GWRWLALAVGTLSALSLAEASMARWPAG---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LTVTPQTPSSAIELVRQAALCYYPREEIAH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Cross-references: GB:AK024100
                                                              57 RINPDGSQS-VVEVT
                                                                                                                                                                                                                                                                                               Species: Vibrio cholerae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 26; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Accession: JC7977
A;Molecule type: mRNA
A;Residues: 1-377 <WAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Status: preliminary
A; Molecule type: DNA
A; Residues: 1-162 <HEI>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Accession: PC7227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Accession: F82493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Map position: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Gene: VCA0173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Genetics:
                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              M.J.; Br
K.; Lim,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Species: Listeria innocua
C;Date: 27-Nov-2001 #sequence_revision 27-Nov-2001 #text_change 31-Dec-2004
C;Accession. AF1803
C;Accession: AF1803
B;Glaser, P.; Frangeul, L.; Buchrieser, C.; Amend, A.; Baquero, F.; Berche, P.; Bloecker, D.; Dominguez-Bernal, G.; Duchaud, E.; Durand, L.; Dussurget, O.; Entian, K.D.; Fsihi, H.
D; Jones, L.M.; Karet, U.
Science 294, 449-852, 2001
A;Authors: Kreft, J.; Kuhn, M.; Kunst, F.; Kurapkat, G.; Madueno, E.; Maitcournam, A.; Ma ok, C.; Schlueter, T.; Simoes, N.; Tierrez, A.; Vazquez-Boland, J.A.; Voss, H.; Wehland, A;Title: Comparative genomics of Listeria species.
A;Feteroce number: AB1077; MUID:21537279; PMID:11679669
A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A,Title: Complete genome sequence of Pseudomonas aeruginosa PA01, an opportunistic pathd A,Reference number: A82950; MUID:20437337; PMID:10984043
A,Accession: E83342
A,Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: UNIPROT:Q926R8; UNIPARC:UPI0000CCA31; GB:AL592022; PIDN:CAC98198.1; A;Experimental source: strain Clip11262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Cross-references: UNIPROT:Q91148; UNIPARC:UP10000CS6CE; GB:AE004670; GB:AE004091; NLD
A;Experimental source: strain PAO1
                                                                                                                                                                                                                                                                                                                                                                                                                                        Sucrose phosphorylase homolog lin2973 [imported] - Listeria innocua (strain Clip11262)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C;Species: Pseudomonas aeruginosa
C;Date: 15-Sep-2000 #sequence_revision 15-Sep-2000 #text_change 09-Jul-2004
C;Accession: E83342
R;Stover, C.K.; Pham, X.Q.; Erwin, A.L.; Mizoguchi, S.D.; Warrener, P.; Hickey, A;Stover, Z.K.; Yuan, Y.; Brody, L.L.; Coulter, S.N.; Polger, K.R.; Kas, A.; Larbig, J. Lory, S.; Olson, M.V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ë
                                                                 ä
                                                                                                                                                           1 : | : | : | : | : | : | 20 IGSGEKRISKESFEAFVMNTDGAQATAPLKEWVE 79
                                                                                                                       15 LGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINPDGSQSVVEVTVTVP 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  hypothetical protain PA2434 [imported] - Pseudomonas aeruginosa (strain PAO1)
                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16;
                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMG-
; Score 70.5; DB 2; Length 375; ; Pred. No. 4.1; 13; Mismatches 37; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 566;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15.5%; Score 69; DB 2; Length 181; 28.0%; Pred. No. 2.8; tive 12; Mismatches 26; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | | | | | | | | | | | | ALVDDLEKEGALV-----SYKONPDGTKSPYEINVT 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             33 ALVDELEWEIAQVDPKKTIQMGSFRINPDGSQSVVEVTVT 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ch 15.7%; Score 69.5; DB 2; 1 Similarity 45.0%; Pred. No. 8.2; 18; Conservative 6; Mismatches 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C, Superfamily: sucrose phosphorylase
     Query Match
'Best Local Similarity 25.7%;
Matches 19; Conservative 1.
                                                                                                                                                                                                                                      75 PNKY----AHSGF 83
                                                                                                                                                                                                                                                                                               PNAVKLDPAKHRGY 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
les 21; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity
Matches 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Molecule type: DNA
A;Residues: 1-181 <STO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Molecule type: DNA A;Residues: 1-566 <GLA>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Gene: lin2973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Gene: PA2434
                                                                                                                                                                                                                                                                                            80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Loca
Matches
                                                                                                                                                                          g
                                                                                                                       ò
                                                                                                                                                                                                                                         ઠ
                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
```

m

용

```
C;Accession: G84341
R;Ng, W.V.; Kennedy, S.P.; Mahairas, G.G.; Berquist, B.; Pan, M.; Shukla, H.D.; Lasky, S; Leithauser, B.; Keller, K.; Cruz, R.; Dandon, M.J.; Hough, D.W.; Maddocks, D.G.; Jablor Jung, K.H.; Alam, M.; Freitas, T.
Proc. Natl. Acad. Sci. U.S.A. 97, 12176-12181, 2000
A;Authors: Hou, S.; Daniels, C.J.; Dennis, P.P.; Omer, A.D.; Ebhardt, H.; Lowe, T.M.; Li A;Reference number: A84160; MUID:20504483; PMID:11016950
                                                                                                                      RiBischoff, J.; Moremen, K.; Lodish, H.F.

S. Biol. Chem. 265, 17110-17117, 1990
A;Title: Isolation, characterization, and expression of CDNA encoding a rat liver endopl
A;Reference number: A38306; MUID:91009139; PMID:2211613
                                                                                                                                                                                                                                                                                                                                                A,Residues: 1-1040 <BIS>
A,Cross-references: UNIPARC:UDI000112EAC9; GB:M57547; GB:J05632; NID:g20
C,Superfamily: Saccharomyces alpha-mannosidase
C,Keywords: glycosidase; hydrolase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NADH2 dehydrogenase (ubiquinone) (EC 1.6.5.3) chain 1 - Florometra serratissima mitochona Cispecies: mitochondrion Florometra serratissima (Cispecies: mitochondrion Florometra serratissima C; bate: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_change 09-Jul-2004 C; Accession: T11116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Cross-references: UNIPROT:Q9HNX1; UNIPARC:UPI00000639D1; GB:AE004437; NID:g10581348; P. C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R;Scouras, A.; Smith, M.J. submitted to the EMBL Data Library, February 1998 A;Description: The complete mitochondrial genome of the crinoid Florometra serratissima.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ų,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ų.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             386 CGIKRFLTQKLSWNLVNSFPHHTF----FWEGLDGSQVLVHFPPGDSYGMQGSVEEVLKT 441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ----10 52
                                C;Species: Rattus norvegicus (Norway rat)
C;Date: 05-May-2000 #sequence_revision 05-May-2000 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C.Species: Halobacterium sp. NRC-1
C.Date: 02-Feb-2001 #sequence_revision 02-Feb-2001 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5 GW----LALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKT----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 1040;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hypothetical protein Vng1906h [imported] - Halobacterium sp. NRC-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 185;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C; Superfamily: Escherichia coli hypothetical protein b4140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28 CGACRALVDELEWEIAQVDPKKTIQMGSFRINPDGSQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14.8%; Score 65.5; DB
32.0%; Pred. No. 44;
tive 3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          / Match 14.5%; Score 64.5; Local Similarity 25.3%; Pred. No. 9; nes 22; Conservative 13; Mismatdhes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |:| : | : | : | AGAFLLTPGLVTDALGFLIVIPVTRVA 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     53 MGSFRINPDGSQSVVEVTVPPNKVA 79
      alpha-mannosidase (EC 3.2.1.24) - rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 32.03
Matches 24; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               73 VPPN----KVAHSGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VTNNRDKGRTNHSGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Residues: 1-185 <STO>
                                                                                                                                                                                                                                                                                    A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Status: preliminary
                                                                                                                                                                                                                                                                                                                         A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: DNA
                                                                                               C; Accession: A38306
                                                                                                                                                                                                                                                          A; Accession: A38306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Accession: G84341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Gene: VNG1906H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       염
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ଚ
                                                                                                            AG1429
Sucrose phosphorylase homolog lmo2840 [imported] - Listeria monocytogenes (strain EGD-e)
Sucrose phosphorylase homolog lmo2840 [imported] - Listeria monocytogenes
C; Date: 27-Nov-2001 #sequence_revision 27-Nov-2001 #text_change 05-Oct-2004
C; Date: 27-Nov-2001 #sequence_revision 27-Nov-2001 #text_change 05-Oct-2004
C; Accession: AG1429
R; Glaser, P.; Frangeul, L.; Buchrieser, C.; Amend, A.; Baquero, F.; Berche, P.; Bloecker
c; Dominguez-Bernal, G.; Duchaud, E.; Durand, L.; Dussurget, O.; Entian, K.D.; Fsihi, H.
D.; Jones, L.M.; Karst, U.
Science 294, 849-852, 2001
Science 294, 849-852, 2001
A; Authors: Kreft, J.; Kuhn, M.; Kunst, F.; Kurapkat, G.; Madueno, E.; Maitournam, A.; Ma A; Authors: Reft, J.; Simoes, N.; Tierrez, A.; Vazquez-Boland, J.A.; Voss, H.; Wehland, A; Reference number: AB1077; MUID:21537279; PMID:11679669
A; Reterence trumber: AB1077; MUID:21537279; PMID:11679669
A; Sctatus: preliminary
A; Molecule type: DNA
A; Date: Date: Date: DA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 unknown protein [imported] - Arabidopsis thaliana
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 02-Mar-2001 #sequence_revision 02-Mar-2001 #text_change 09-Jul-2004
C;Accession: A96455
R;Theologis, A.; Ecker, J.R.; Palm, C.J.; Federspiel, N.A.; Kaul, S.; White, O.; Alonso, Chin, C.W.; Chung, M.K.; Conn, L.; Conway, A.B.; Conway, A.R.; Creasy, T.H.; Dewar, K.; Raunen, N.F.; Huughes, B.; Huizar, L.
Nature 408, 816-820, 2000
A;Authors: Hunter, J.L.; Jenkins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; Kim, C.C.A.; Li, J.H.; Li, Y.; Lin, X.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Maiti, R.; Marziali, Rizo, M.; Roney, T.; Rowley, D.; Sakano, H.
A;Authors: Salzberg, S.L.; Schwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon, A;Reference and analysis of chromosome 1 of the plant Arabidopsis.
A;Reference number: A86141; MUID:21016719; PMID:11130712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Cross-references: UNIPROT: Q8Y3J5; UNIPARC: UPI00000CF250; GB: NC_003210; PIDN: CAD01053.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: UNIPROT:Q9C8E9; UNIPARC:UP100000A96F7; GB:AE005173; NID:g11141996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
120 LDFHALPYQVVEVNPVLRAEIKFSSYRKVPILVAQEGESSQQLNDSSVII 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 413;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14.8%; Score 65.5; DB 2; Length 233; 33.3%; Pred. No. 8.9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SVDDKCAACNAVAEELELQLLKEKPRNHLDMRN-RLNSKGQR 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23 SQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINPDGSQ 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                201 ALVNDLEEEGALV-----SYKONPDGSKSPYEINVT 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               33 ALVDELEWEIAQVDPKKTIQMGSFRINPDGSQSVVEVTVT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15.2%; Score 67.5; DE 45.0%; Pred. No. 9.8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C,Genetics:
A,Gene: 1mo2840
C,Superfamily: sucrose phosphorylase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Experimental source: strain EGD-e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity 33.33
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity
Matches 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Residues: 1-413 <GLA>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A, Residues: 1-233 <STO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A, Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A, Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Gene: T8D8.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT
A33306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð,
```

셤

셤

Page

```
A; Reference number: A39746; MUID: 92017217; PMID: 1681410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tilly33

NADH2 dehydrogenase (ubiquinone) (EC 1.6.5.3) chain 1 - sea urchin (Arbacia lixula) mitch (Species: mitochondrion Arbacia lixula (black urchin)
C; Species: mitochondrion Arbacia lixula (black urchin)
C; Date: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_change 09-Jul-2004
C; Accession: Tilly33; E39746
C; Accession: Tilly33; E39746
A; Deference number: 2323-332, 1996
A; Title: Complete sequence of the mitochondrial DNA in the sea urchin Arbacia lixula: Cd
A; Recession: Tilly33
A; Reterence number: 217346; MUD:96292527; PMID:8728390
A; Accession: Tilly33
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Residues: 1-323 acbGl>
A; Accession: Tilly33
A; Cross-references: UNIPROT:Q37393; UNIPARC:UPI0000096821; EMBL:X80396; NID:g1321876; PI
A; Experimental source: eggs
R; De Giorgi, C.; Lanave, C.; Musci, M.D.; Saccone, C.
Mol. Biol: Evol: 8, 515-229, 1991
A; Title: Mitochondrial DNA in the sea urchin Arbacia lixula: evolutionary inferences fro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: UNIPROT:P15548; UNIPARC:UP10000130645; EMBL:X12631; NID:g296545; PIQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Genome: mitochondrion
A;Genetic code: SGC8
C;Superfamily: NADH:quinone oxidoreductase (complex I), subunit 1/[NiFe]-hydrogenase-3-t
C;Keywords: membrane-associated complex; mitochondrion; NAD; oxidative phosphorylation;
   A;Reference number: 217249
A;Receasion: Tilli6
A;Accession: Tilli6
A;Accession: Tilli6
A;Accession: Tilli6
A;Molecule type: DNA
A;Molecule type: DNA
A;Residues: 1-325 <SCO>
A;Cross-references: UNIPROT:063587; UNIPARC:UP1000008ECF6; EMBL:AF049132; NID:g2970420; C;Genetics:
                                                                                                                                                                                                                                        A;Genome: mitochondrion
C;Superfamily: NADH:quinone oxidoreductase (complex I), subunit 1/[NiFe]-hydrogenase-3-t
C;Keywords: membrane-associated complex; mitochondrion; NAD; oxidative phosphorylation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NADH2 dehydrogenase (ubiquinone) (EC 1.6.5.3) chain 1 - sea urchin (Strongylocentrotus C, Species: mitochondrion Strongylocentrotus purpuratus (purple urchin)
C, Species: mitochondrion Strongylocentrotus purpuratus (purple urchin)
C, Accession: S01499
R, Jacobs, H.T.; Elliott, D.J.; Math, V.B.; Farquharson, A.
J. Mol. Biol. 202, 185-217, 1988
A; Title: Nucleotide sequence and gene organization of sea urchin mitochondrial DNA.
A; Reference number: S01499; MUID:89011951; PMID:3172215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7 LALLIG-----ALLGTAWARRSQDLHCGACRALVDELEWE--IAQVDPKKTIQMGSFR
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ٠<u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
14.3%; Score 63.5; DB 2; Length 322;
Best Local Similarity 36.4%; Pred. No. 21;
Matches 16; Conservative 8; Mismatches 13; Indels
                                                                                                                                                                                                                                                                                                                                                                                  DB 2; Length 325;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  106 LLLVLGLSSLSVYAILGSGWASNSKYSLLGAIRAVAQTISYEIS 149
                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 32.3%; Pred. No. 16;
Marches 20; Conservative 10; Mismatches 23; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7 LALLIG-----ALIGTAWARRSQDLHCGACRALVDELEWEIA 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Molecule type: DNA
A;Residues: 1-322 <JAC>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  :-
LN 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1N 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C, Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Gene: nd1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
```

```
A;Accession: E39746
A;Status: preliminary
A;Molecule type: D1A
A;Residuss: 'IY', 2-41,'N', 41-45,'LTDFCNL', 53-124 <DEG2>
A;Residuss: 'IY', 2-41,'N', 41-45,'LTDFCNL', 53-124 <DEG2>
A;Cross-references: UNIPARC:UPI0000175070; EMBL:X53726
C;Genetics: mitochondrion
A;Genetic code: SGC8
C;Superfamily: NADH:quinone oxidoreductase (complex I), subunit 1/[NiFe]-hydrogenase-3-t;C;Reywords: membrane-associated complex; mitochondrion; NAD; oxidative phosphorylation; c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NADHZ dehydrogenase (ubiquinone) (EC 1.6.5.3) chain 1 - sea urchin (Paracentrotus lividus C;Species: mitochondrion Paracentrotus lividus (common urchin)
C;Date: 29-Jun-1990 #sequence_revision 12-Mar-1999 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Accession: A34284
A;Molecule type: DNA
A;Residues: 1-323 <CAN>
A;Cross-references: UNIPROT: P12772; UNIPARC: UP1000013062A; GB:J04815; NID:g342913; PIDN:A;Cross-references: UNIPROT: P12772; UNIPARC: UP1000013062A; GB:J04815; NID:g342913; PIDN:A;Cantatore, P.; Roberti, M.; Rainaldi, G.; Saccone, C.; Gadaleta, M.N.
Curr. Genet. 13, 91-96, 1988
A;Fitle: Clustering of tRNA genes in Paracentrotus lividus mitochondrial DNA.
A;Reference number: Z17886; MUID:88194714; PMID:2834108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Genome: mitochondrion
A;Genetic code: SGC8
C;Superfamily: NADH:quinone oxidoreductase (Complex I), subunit 1/[NiFe]-hydrogenase-3-t;
C;Keywords: membrane-associated complex; mitochondrion; NAD; oxidative phosphorylation; C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    probable galactinol synthase F25F12.95 [impotted] - Arabidopsis thaliana Cispecies: Arabidopsis thaliana (mouse-ear ctess) C;Species: Arabidopsis thaliana (mouse-ear ctess) C;Date: 02-Mar-2001 #sequence_revision 02-Mar-2001 #text_change 09-Jul-2004 C;Date: 02-Mar-2001 #sequence_revision 02-Mar-2001 #text_change 09-Jul-2004 C;Date: 03-Mar, R.; Ral, R.; Ral, S.; White, O.; Alonso, R;Theology, A.; Echung, M.K.; Conn, L.; Conway, A.B.; Conway, A.R.; Creasy, T.H.; Dewar, K.; ansen, N.F.; Hughes, B.; Hulzar, L. Nature 408, 816-820, 2000 A;Authors: Hunter, J.L.; Jenkins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; Kim, C. C.A.; Li, J.H.; Li, Y.; Lin, X.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Maiti, R.; Marziali, Rizzo, M.; Rooney, T.; Rowley, D.; Sakano, H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Cross-references: UNIPARC:UP1000013062A; EMBL:M37162; NID:9342927; PIDN:AAA65506.2; PII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ٦,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Match 14.3%; Score 63.5, DB 2; Length 323; Local Similarity 36.4%; Pred. No. $1; local Since 16; Conservative 8; Mismatches 13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                    Score 63.5; DB 2; Length 323;
Pred. No. 21;
8; Mismatches 13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7 LALLIG-----ALLGTAWARRSQDLHCGACRALVDELEWEIA 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7 LALLIG-----ALLGTAWARRSQDLHCGACRALVDELEWEIA 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Status: preliminary; translated from GB/EMBL/DDBJ A;MoLecule type: DNA A;Residues: 1-323 <CA2>
                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 36.4%;
Matches 16; Conservative
```

шţ

```
A;Authors: Salzberg, S.L.; Schwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon, ker, M.; Wu, D.; Yu, G.; Fraser, C.M.; Venter, J.C.; Davis, R.W.
A;Itle: Sequence and analysis of chromosome 1 of the plant Arabidopsis.
A;Reference number: A86141; MUID:21016719; PMID:11130712
A;Accession: G96607
A;Accession: G96607
A;Accession: G96607
A;Residues: 1-335 <STO>
A;Cross-references: UNIPROT:Q9FXB2; UNIPARC:UPI00000A96EC; GB:AE005173; NID:g9954752; PI C;Genetics:
C;Genetics: A;App position: 1
```

Genetics:
Gene: F25P12.95
Map position: 1
Query Match
Best Local Similarity 27.5%; Pred. No. 22;
Matches 19; Conservative 11; Mismatches 34; Indels 5; Gaps 3;

Search completed: May 8, 2006, 20:57:33 Job time : 40 secs

QQ

ò

THIS PAGE BLANK (USPTO)

```
Sequence 204, App
Sequence 110, App
Sequence 110, App
Sequence 205, App
Sequence 111, App
Sequence 111, App
Sequence 14025, App
Sequence 23614, A
Sequence 7, Appli
Sequence 7, Appli
Sequence 7, Appli
Sequence 7, Appli
Sequence 395, App
Sequence 395, App
Sequence 395, App
Sequence 2562, App
Sequence 2562, App
Sequence 2562, App
Sequence 2782, Appli
Sequence 2782, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     395, App
3792, App
425, App
6617, Ap
12562, Appl
1, Appli
2, Appli
                                                                                                                          8, 2006, 20:57:05; Search time 46 Seconds (without alignments) 149:176 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                  83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                           444
1 MKGWGWLALLLGALLGTAWA......QSVVEVTVTVPPNKVAHSGF
GenCore version 5.1.8
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Issued Patents AA:*

(cgn2_6/ptodata/1/iaa/5_COMB.pep:*

(cgn2_6/ptodata/1/iaa/6_COMB.pep:*

(cgn2_6/ptodata/1/iaa/H_COMB.pep:*

(cgn2_6/ptodata/1/iaa/PCTUS COMB.pep:*

(cgn2_6/ptodata/1/iaa/RE_COMB.pep:*

(cgn2_6/ptodata/1/iaa/RE_COMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                          572060 segs, 82675679 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                   - protein search, using sw model
                                                                                                                                                                                                                                                                                                         BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                               seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                    US-10-716-824-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          666.5
666.5
666.5
666.5
666.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
646.5
                                                                                                                                                                                                                 Title:
Perfect score:
                                                                                                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             444
410.5
369
369
209.5
109.5
73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score
                                                                                   OM protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                  Sequence:
                                                                                                                                                                                                                                                                                                                                                                          Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Database
                                                                                                                              Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Result
No.
```

Sequence 103, App Sequence 25180, A Sequence 25180, A Sequence 41204, A Sequence 6515, App Sequence 8520, App Sequence 650, Appli Sequence 7, Appli Sequence 7, Appli Sequence 11, Appli Sequence 11, Appli Sequence 10758, A Sequence 360, App Sequence 360, App Sequence 832, App Sequence 832, App Sequence 128, App	S	Length 84; Indels 0; Gaps 0; EIAQVDFKKTIQMGSFRINP 60
US-08-469-537A-103 US-09-252-991A-25180 US-09-276-7457-4204 US-09-270-767-4204 US-09-107-532A-6515 US-09-464-535-42 US-09-949-016-8421 US-09-949-016-8421 US-09-949-016-8530 US-08-448-160-4 US-08-448-160-4 US-09-435-376-5 US-09-76-594-909 US-09-919-018-3360 US-09-919-018-3360 US-09-919-018-3360 US-09-919-018-3380 US-09-919-018-3380 US-09-919-018-3380 US-09-919-018-3380 US-09-919-018-3380 US-09-919-018-3380 US-09-919-018-3380 US-09-919-018-3380 US-09-919-018-3380 US-09-919-018-3380 US-09-919-018-3380	ALIGNMENTS 9663600A E, Jean-Baptiste CDNAS FOR SECRETED PROTEINS 8/09/663,600A 15 191,997 066,677 069,957 091,563	ore 444; DB 2; ed. No. 2e-49; Mismatdhes 0; QDLHCGACRALVDELEW QDLHCGACRALVDELEW 83
14.0 1005 13.9 305 2 13.9 305 2 13.9 354 2 13.7 1066 2 13.7 1006 2 13.6 271 1 13.6 271 1 13.6 271 1 13.5 267 1 13.5 267 1 13.5 267 1 13.5 208 2 13.5 308 2 13.5 308 2 13.4 120 2	ALIGNME SESULT 1 SSQUENCE 204, Application US/09663600A PATENT NO. 6573068 PATENT NO. 6573068 APPLICANT: Dumas Milne Edwards, Jean-Bag APPLICANT: Dumas Milne Edwards, Jean-Bag APPLICANT: Dumas Milne Edwards, Jean-Bag APPLICANT: Bouguelerer, Lydic TITLE OF INVENTION: EXTENDED CONAS FOR FILES REFERENCE: 31.US3.CIP TITLE OF INVENTION: EXTENDED CONAS FOR STILES REFERENCE: 31.US3.CIP TITLE OF INVENTION DATE: 1998-11-13 PRIOR APPLICATION NUMBER: 60/066,677 PRIOR APPLICATION NUMBER: 60/066,677 PRIOR PRILING DATE: 1998-11-13 PRIOR FILING DATE: 1998-01-17 PRIOR PRILING DATE: 1998-04-13 PRIOR APPLICATION NUMBER: 60/099,273 PRIOR FILING DATE: 1998-09-10 PRIOR APPLICATION NUMBER: 60/099,273 PRIOR FILING DATE: 1998-09-04 TYPE: PRI CON APPLICATION NUMBER: 60/099,273 PRIOR FILING DATE: 1998-09-10 PRIOR FILING DATE: 1998-09-04 TYPE: PRINCE FILING DATE: 1998-09-10 PRIOR FILING DATE: 1998-09-09 PRIOR FILING DATE: 1998-09-10 PRIOR FILING DATE: 1998-09-10 PRIOR FILING DATE: 1998-09-10 PRIOR PRIOR PRIOR DATE: 1998-09-09 PRIOR PRIOR PRIOR DATE: 1998-09-10	Similarity 100.0%; Pr 100.0%; Pr 23; Conservative 0; MKGWGWLALLLGALLGTAWARRS
28 29 30 31 61.5 32 61.5 33 61.5 34 61.5 35 60.5 39 60.5 41 41 60.5 42 43 60.5 44 45 45 45 45 45 45 45 45 45 45 45 45	RESULT 1 US-09-663-600A-204 ; Sequence 204, Appli ; Patent No. 6573068 ; GENERAL INFORMATION ; APPLICANT: Dunas M APPLICANT: Ducler; APPLICANT: BOUGUE ; TITLE OF INVENTION ; CURRENT FILING DATE: PRIOR APPLICATION ; PRIOR PRIOR APPLICATION ; PRIOR FILING DATE: ; RAMENTER: PRIOR FILING DATE: ; NUMBER OF SEQ ID NO SOGTWARRE: PRIOR FILING SADE: ; NAME/KEY: SIGNAL ; LOCATION: -201 US-09-663-600A-204	Query Match Best Local S. Matches 83 Qy 1 1 Qy 61 1 Db b 61 1

```
1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDFKKTIQMGSFRINP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                               Length 97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 182;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MESOUR:

Sequence 205, Application US/09663600A

Sequence 205, Application US/09663600A

Sequence 205, Application US/09663600A

Sequence 205, Application US/09663600A

GENERAL INFORMATION:
APPLICANT: Duclert, Apmente
APPLICANT: Duclert, Apmente
APPLICANT: Bouglerte, Lydie
TITLE OF INVENTION: EXTENDED CDNAS FOR SECRETED PROTEINS
FILE REFERENCE: 31.U33.CIP
CURRENT APPLICATION NUMBER: US/09/63,600A

CURRENT APPLICATION NUMBER: 09/191,997

PRIOR APPLICATION NUMBER: 60/069,957

PRIOR FILING DATE: 1998-11-13

PRIOR PILING DATE: 1999-12-17

PRIOR PLILOR DATE: 1999-00-09

PRIOR PLILOR DATE: 1998-04-13

PRIOR PLILOR DATE: 1998-09-04

NUMBER OF SED ID NOS: 229

SOFTWARE: PRECENT. PM

SEQ ID NOS: 229

SEQ ID NOS: 229

SEQ ID NOS: 229
                                                                                                                                   FEATURE:

NAME/KEY: SIGNAL

LOCATION: -20..-1

NAME/KEY: UNSURE

LOCATION: 53

OTHER INFORMATION: Xaa = any one of the twenty amino acids
US-09-663-600A-110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 83.1%; Score 369; DB 2; L
Best Local Similarity 100.0%; Pred. No. 2.4e-39;
Matches 69; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                        DB 2;
                                                                                                                                                                                                                                                                                                                                                                                        Score 410.5; DB 2,
Pred. No. 4.8e-45;
1; Mismatches 3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 DGSQSVVEVTVTV-PPNKVAHSGF 83
                                                                                                                                                                                                                                                                                                                                                                                        Query Match 92.5%;
Best Local Similarity 94.0%;
Matches 79; Conservative
                                        LENGTH: 97
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 DGSQSVVEV 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 DGSQSVVEV 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; LOCATION: -20..-1
US-09-663-600A-205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: SIGNAL LOCATION: -20..-1
          SEQ ID NO 110
LENGTH: 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MKGWGWLALLIGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDFKKTIQMGSFRINP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 100.0%; Score 444; DB 2; Length 85; Best Local Similarity 100.0%; Pred. No. 2e-49; Matches 83; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Dumds Milne Edwards, Jean-Baptiste
APPLICANT: Dumds Milne Edwards, Jean-Baptiste
APPLICANT: Dumds Milne Edwards, Jean-Baptiste
APPLICANT: Dumds Wilner.
FULL OF INVENTION: EXTENDED CDNAS FOR SECRETED PROTEINS
FILE REFERENCE: 31.U33.CIP
CURRENT FILING DATE: 2000-09-15
PRIOR FILING DATE: 1998-11-13
PRIOR APPLICATION NUMBER: 60/066,677
PRIOR APPLICATION NUMBER: 60/066,677
PRIOR FILING DATE: 1997-11-13
PRIOR FILING DATE: 1997-12-17
PRIOR FILING DATE: 1999-12-17
PRIOR FILING DATE: 1999-12-17
PRIOR FILING DATE: 1998-09-09
PRIOR FILING DATE: 1998-08-10
PRIOR FILING DATE: 1998-08-10
PRIOR FILING DATE: 1998-09-04
NUMBER OF SEQ ID NOS: 229
SOFTWARE: PATENT.PM
PESULT 2
US-09-716-129-63
Sequence 63, Application US/09716129
Fatent No. 6632920
GENERAL INFORMATION:
TITLE OF INVENTION: 36 Human Secreted Proteins
FILE REFERENCE! PZ025P1
CURRENT APPLICATION NUMBER: 05/076,053
FRIOR FILING DATE: 1998-02-26
FRIOR FILING DATE: 1998-02-26
FRIOR APPLICATION NUMBER: 60/076,057
FRIOR FILING DATE: 1998-02-26
FRIOR APPLICATION NUMBER: 60/076,057
FRIOR FILING DATE: 1998-02-26
FRIOR FILING DATE: 1908-02-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: SITE

1. LOCATION: (85)

7. OTHER INFORMATION: Xaa equals stop translation US-09-716-129-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-663-600A-110
; Sequence 110, Application US/09663600A
; Patent No. 6573068
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 DGSÓSVVEVTVTVPPNKVAHSGF 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 DGSQSVVEVTVTVPPNKVAHSGF 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 63
LFNGTH: 85
```

g ઠે Gaps

3;

```
1 MKGWGWLALLIGALLGTAWARRSQDLHCGACRALVDETRMGNCPGGPQEDHSDGIF---P 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 44025, Application US/09270767
Patent No. 6703491
GENERAL INFORMATION:
TITLE OF INVENTION: Nucleic acids and proteins of Drosophila melanogaster
FILE REFERENCE: File Reference: 7326-094
CURRENT APPLICATION NUMBER: US/09/270,767
CURRENT PILING DATE: 1999-03-17
NUMBER OF SEQ ID NOS: 62517
SOFTWARE: PatentIn Ver. 2.0
SSEQ ID NO 44025
LENGTH: 197
                                                                                                                                                                        1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8 ALLIGALIGTA--WARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINPDGS 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13 ALILFGLLALAQCYSFTSREVKCHVCKAVVTELEEAIAKEDPHKWADVSGFRLDAQGN 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 419;
                                                                                      Length 86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ch 21.6%; Score 96; DB 2; Length 197; 1 Similarity 37.9%; Pred. No. 0.00034; 22; Conservative 13; Mismatches 21; Indels
                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                 Score 209.5; DB 2;
Pred. No. 2.8e-19;
3; Mismatches 15;
                                                                                                                                                                                                                                                                                                                                                                                            Sequence 106, Application US/09893737

Patent No. 6822082.
GENERAL INFORMATION:
APPLICANT: Sheppard, Paul O.
APPLICANT: Presenell, Scott R.
TITLE OF INVENTION: MAMMALIAN SECRETED PROTEINS
FILE REFERENCE: 00-106-28
CURRENT FILING DATE: 2001-06-28
PRIOR PRILOTATION NUMBER: US 60/215,446
PRIOR APPLICATION NUMBER: US 60/215,446
PRIOR PILING DATE: 2000-06-30
NUMBER OF SEQ ID NOS: 329
SEQTUARE: FastSEQ for Windows Version 3.0
SEQ ID NO 106
MUNICAL HOUSE NO 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 24.7%; Score 109.5; DB 2; Best Local Similarity 62.9%; Pred. No. 1.7e-05; Matches 22; Conservative 7; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30 ACRALVDELEWEIAQVDPKKTIQMGSFRINPDGSQ 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Drosophila melanogaster
US-09-270-767-44025
                                                                                      47.2%;
                                                                               Query Match
Best Local Similarity 67.2*
Matches 43; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT

ORGANISM: Homo sapiens
US-09-893-737-106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Matches 22; Conserva
; NAME/KEY: SIGNAL
; LOCATION: -20..-1
US-09-663-600A-111
                                                                                                                                                                                                                                                         61 DGSQ 64
                                                                                                                                                                                                                                                                                                 DOSR 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-270-767-44025
                                                                                                                                                                                                                                                                                                                                                                                     US-09-893-737-106
                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                        Š
                                                                                                                                                                                                             엄
                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                      27 MKGWGWLALLIGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 2; Length 208;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Dunate miline browaids, bean-bapciste
APPLICANT: Dunate miline browaids, bean-bapciste
APPLICANT: Bodgueleret, Lydie
TITLE OF INVENTION: EXTENDED CONAS FOR SECRETED PROTEINS
FILE REFERENCE: 31.US3.CIP
CURRENT FILING DATE: 2000-09-15
CURRENT FILING DATE: 1998-11.13
PRIOR PILING DATE: 1997-11-13
PRIOR APPLICATION NUMBER: 60/066,677
PRIOR APPLICATION NUMBER: 60/066,677
PRIOR FILING DATE: 1997-11-13
PRIOR FILING DATE: 1997-12-17
PRIOR FILING DATE: 1998-02-09
PRIOR FILING DATE: 1998-02-09
PRIOR PILING DATE: 1998-08-10
PRIOR FILING DATE: 1998-09-04
NUMBER OF SEQ ID NOS: 229
NUMBER OF SEQ ID NOS: 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             83.1%; Score 369; DB 2; L
100.0%; Pred. No. 2.9e-39;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 6
US-09-663-600A-111
Sequence 111, Application US/09663600A
Patent No. 6573068
GENERAL INFORMATION:
APPLICANT: Dumas Milne Edwards, Jean-Baptiste
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity 100.
hes 69; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DGSQSVVEV 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DGSQSVVEV 95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; TYPE: PRT
; ORGANISM: Human
US-09-949-016-8023
                                                         US-09-949-016-8023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
```

ï

Gaps

1;

ä

```
Sequence 2, Application US/09070526
Patent No. 6100059
                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-070-526-2
                                                                                                                                                                        CITY:
STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3 GWGWLALLIGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMG-----SF 56
                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: Goldman, Barry S.
APPLICANT: Hinkle, Gregory J.
APPLICANT: Hinkle, Gregory J.
APPLICANT: Stater, Steven C.
APPLICANT: Stater, Steven C.
TITLE OF INVENTION: Myxococcus xanthus Genome Sequences and Uses Thereof FILE REFRENCE: 38-10(15849)B CURRENT TILING DATE: 2001-07-10
CURRENT FILING DATE: 2001-07-10
PRIOR FILING DATE: 2000-07-10
NUMBER OF SEQ ID NOS: 16825
SEQ ID NO 14840
LENGTH: 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26; Indels 16;
                                                                                                                                                                                                                                                                                                                                                                                           46;
                                                                                                                                                                                                                                                                                                                                                                                                                      2 KGWGWLALLLGAL-LGTAWARRSQDLHCGACRALVDELEWEIAQVDPK----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 28.0%; Pred. No. 6.7;
Matches 21; Conservative 12; Mismatches 26; Indels
                                                                                                                                                                                                                                                                                                                                                         DB 2; Length 173;
                                                                                                                                                                                                                                                                                                                                                                                         18; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                53 NTTSGTGPGTTPQTGSTNTNPN------TLPP 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -----KTIQMGSFRINPDGSQSVVEVTVPP 75
                                                                                                                                                                                                                                                                                                                                                             Query Match
16.4%; Score 73; DB
Best Local Similarity 26.0%; Pred. No. 0.26
Matches 25; Conservative 7; Mismatches
                                                Sequence 14840, Application US/09902540 Patent No. 6833447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ) ORGANISM: Pseudomonas aeruginosa
US-09-252-991A-23614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             :: ||||: |:|||
683 KLQADGSQALVMEVT 697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             57 RINPDGSQS-VVEVT 70
                                                                                                                                                                                                                                                                                                                , ORGANISM: Myxococcus xanthus
US-09-902-540-14840
                                      US-09-902-540-14840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               쉱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                         ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
```

RESULT 11 US-09-070-526-2

```
-----ODLHCGACRALVDEL 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12 WMFLL---LLGGAWAGHSRAQEDKVLGGHECOPHSOPWOAALFOGOOLLCGG--VLVGG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels 37; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 260;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 39 EWEIAQV---DPKKTIQMGSFRI-NPDGSQSVVEVTVP 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Yue, Henry
Guegler, Karl J.
Corley, Neil C.
Tang, Tom Y.
Shah, Purvi
TITLE OF INVENTION: HUMAN PROTEASE MOLECULES
NUMBER OF SEQUENCES: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
15.0%; Score 66.5; DB 2;
Best Local Similarity 26.0%; Pred. No. 3;
Matches 26; Conservative 10; Mismatches 27;
                                                                                                                                                                                                                                                      COUNTY: USA

ZIF: 19482

COMPUTER READABLE FORM:
MBDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOCTWARE: FAREISE (FOR WINDOWS Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/070,526
FILING DATE: 30-APR-1998
CLASSIFICATION DATA:
APPLICATION NUMBER: GB 9711952.3
FILING DATE: 1-DEC-1997
APPLICATION NUMBER: EP 97309646.4
FILING DATE: 1-DEC-1997
ATTORNEY AGENT INPORMATION:
NAME: PRESTIA, PAUL F
REGISTRATION NUMBER: 23,031
REFERENCE/DOCKET NUMBER: 23,031
TELEPHONE: 610-407-0700
TELEPHONE: 610-407-0701
                  APPLICANT: SOUTHAN, CHRISTOPHER
APPLICANT: CLINKENBEARD, HELEN
ENPLICANT: BURGESS, NICOLA
ITLE OF INVENTION: No. 6100059e1 Compounds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Bandman, Olga
Hillman, Jennifer L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6 WLALLLGALLGTAWARRS-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 7, Application US/09008271A; Patent No. 6203979; GENERAL INFORMATION:
                                                                                                         NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: RATNER & PRESTIA
STREET: P.O. BOX 980
CITY: VALLEY FORGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEX: 846169
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          260 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: amino acid
STRANDEDNESS: Biz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
GENERAL INFORMATION:
                                                                                                                                                                                                                                             USA
                                                                                                                                                                                                                          PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 12
US-09-008-271A-7
```

9

```
6 WLALLLGALLGTAWARRS-------38
                                                                                                                       12 WMFLL---LLGGAWAGHSRAQEDKVLGGHRCQPHSQPWQAALFQGQQLLCGG--VLVGG- 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -----QDLHCGACRALVDEL 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12 WMFLL---LLGGAWAGHSRAQEDKVLGGHECQPHSQPWQAALSQGQLLCGG--VLVGG- 65
                                           Gaps
                                         37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 2; Length 260;
                                         27; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: PESSESED for Windows Version 2.0
CURENT APPLICATION DATA:
APPLICATION NUMBER: US/09/968,415
FILING DATE: 26-Sep-2001
PRIOR APPLICATION NUMBER: 09/659,151
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                66 NWVLTAAHCKKPKYTVRLGDHSLQNKDGPEQEIPVVQSIP 105
                                                                                                                                                                    39 EWEIAQV---DPKKTIQMGSFRI-NPDGSGSVVEVTVP 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               39 EWEIAQV---DPKKTIQMGSFRI-NPDGSQSVVEVTVTVP 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: HUMAN PROTEASE MOLECULES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
ADDRESSEE: Incyte Pharmaceuticals, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER: PF-0458 US
                    Pred. No. 3;
); Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15.0%; Score 66.5; 26.0%; Pred. No. 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6 WLALLGALLGTAWARRS-------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLONE: 1798496
SEQUENCE DESCRIPTION: SEQ ID NO: 7:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Mohan-Peterson, Sheela
                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Bandman, Olga
Hillman, Jennifer L.
Yue, Henry
Guegler, Karl J.
Corley, Neil C.
Tang, Tow Y.
Shah, Purvi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REGISTRATION NUMBER: 41,201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELECOMMUNICATION INFORMATION
26.0%; Pic.
                                                                                                                                                                                                                                                                                                                       Sequence 7, Application US/09968415
Patent No. 6855811
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE: 650-855-0555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 260 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STREET: 3174 Porter Dr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: 650-845-4166
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ZIP: 94304
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: amino acid
STRANDEDNESS: single
                                           26; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity 26.03
Matches 26; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: Palo Alto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IMMEDIATE SOURCE
                Best Local Similarity
Matches 26; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STATE: CA
                                                                                                                                                                                                                                                                                                         US-09-968-415-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-968-415-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                  ઠે
                                                                                                                         g
                                                                                                                                                                    ò
                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----QDLHCGACRALVDEL 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12 WMFLL---LLGGAWAGHSRAQEDKVLGGHECQPHSQPWQAALSQGQQLLCGG--VLVGG- 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 15.0%; Score 66.5; DB 2; Length 260; Best Local Similarity 26.0%; Pred. No. 3; Matches 26; Conservative 10; Mismatches 27; Indels 37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:

GENERAL INFORMATION:

APPLICANT: O'Brien, Timothy J.

APPLICANT: Underwood, Lowell J.

TITLE OF INVENTION: No. 6642013el Extracellular Serine Protease
FILE REFERENCE: D6020CIP2

CURRENT APPLICATION NUMBER: US/09/618,259

CURRENT FILING DATE: 2000-07-18

PRIOR APPLICATION NUMBER: US 09/127,444

SERO ID NOS: 72

SEQ ID NO 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
; OTHER INFORMATION: Amino acid sequence of TADG-14 protein
US-09-618-259-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               66 NWVLTAAHCKKPKYTVRLGDHSLQNKDGPEQEIPVVQSIP 105
                                                                                                                                                                                                         COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/008,271A
FILING DATE: 16-Jan-1998
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 39 EWEIAQV---DPKKTIQMGSFRI-NPDGSQSVVEVTVP
           CORRESPONDENCE ADDRESS:
ADDRESSE: Incyte Pharmaceuticals, Inc.
STREET: 3174 Porter Dr.
CITY: Palo Alto
STATE: CA
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: <Unknown>
FILING DATE: <Unknown>
ATTORNEY/AGENT INFORMATION:
NAME: MOHAN-PETERSON, Sheela
REGISTRATION NUMBER: 41,201
REFERENCE/DOCKET NUMBER: PF-0458 US
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE DESCRIPTION: SEQ ID NO: 7 :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEPHONE: 650-855-0555
TELEFAX: 650-845-4166
INFORMATION FOR SEQ ID NO: 7:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6 WLALLGALLGTAWARRS-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 260 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 7, Application US/09618259 Patent No. 6642013
                                                                                                                                           ZIP: 94304
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
IMMEDIATE SUURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LIBRARY: COLNNOT27
CLONE: 1798496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-008-271A-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 13
US-09-618-259-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 260
```

셤 ð

\$

::

DB 2; Length 260;

Score 66.5;

15.0%;

Query Match

```
R APPLICATION NUMBER: 60/079053

R APPLICATION NUMBER: 60/07905

R APLING DATE: 1998-03-27

R APPLICATION NUMBER: 60/079786

R FILING DATE: 1998-03-27

R APPLICATION NUMBER: 60/079920

R FILING DATE: 1998-03-30

R FILING DATE: 1998-03-30

R APPLICATION NUMBER: 60/080105

R APPLICATION NUMBER: 60/080105

R FILING DATE: 1998-03-31

R FILING DATE: 1998-03-31

R APPLICATION NUMBER: 60/080105

R FILING DATE: 1998-03-31

R APPLICATION NUMBER: 60/080105

R FILING DATE: 1998-03-31

R R FILING DATE: 1998-03-31

R R PILING DATE: 1998-03-31

R R FILING DATE: 1998-03-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: 60/081952
PRIOR FILING DATE: 1998-04-15
PRIOR APPLICATION NUMBER: 60/081952
PRIOR APPLICATION NUMBER: 60/081952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-04-27
APPLICATION NIMBER: 60/083322
FILING DATE: 1998-04-28
APPLICATION NIMBER: 60/083392
FILING DATE: 1998-04-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/081838
FILING DATE: 1998-04-15
APPLICATION NUMBER: 60/082568
                                                                  APPLICATION NUMBER: 60/079689
FILING DATE: 1998-03-27
APPLICATION NUMBER: 60/079663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/080327
FILING DATE: 1998-04-01
APPLICATION NUMBER: 60/080328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-04-01
APPLICATION UNMBER: 60/081070
FILING DATE: 1998-04-08
APPLICATION NUMBER: 60/081049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/082804
FILING DATE: 1998-04-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/083336
                 APPLICATION NUMBER: 60/079664
FILING DATE: 1998-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-04-08
APPLICATION NUMBER: 60/081071
FILING DATE: 1998-04-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1998-04-08
APPLICATION NUMBER: 60/081203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1998-04-09
APPLICATION NUMBER: 60/081229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-04-09
APPLICATION NUMBER: 60/081955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-04-15
APPLICATION NUMBER: 60/081817
FILING DATE: 1998-04-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-04-21
APPLICATION NUMBER: 60/082569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/082704
FILING DATE: 1998-04-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/082700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/082797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/082796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-04-01
APPLICATION NUMBER: 60/080333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-04-01
APPLICATION NUMBER: 60/080334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/081195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/081819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             998-04-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-04-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                    PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Tunes, Danie, APPLICANT: Tunes, Danie, APPLICANT: Williams, P. Mickey, APPLICANT: Wood, Williams, P. Mickey, APPLICANT: Wood, Williams, P. Mickey, APPLICANT: Wood, Williams, TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic TITLE OF INVENTION: Acids Encoding the Same FILE OF INVENTION: ACID SECOND SECOND
66 NWVLTAAHCKKPKYTVRLGDHSLQNKDGPEQEIPVVQSIP 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Hillan, Kenneth J
Kljavin, Ivar J.
Kuo, Sophia S.
Napier, Mary A.
                                                                                                                           Sequence 395, Application US/09999833A Patent No. 6916648 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1998-03-20
APPLICATION NUMBER: 60/078910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/079294
FILING DATE: 1998-03-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/078936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATION NUMBER: 60/078939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-03-25
APPLICATION NUMBER: 60/079656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Roy, Margaret Ann
Shelton, David L.
Stewart, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gerritsen, Mary E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pan, James;
Paoni, Nicholas F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                         Ferrara, Napoleon
Filvaroff, Ellen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gerber, Hanspeter
                                                                                                                                                                                                               APPLICANT: Ashkenazi, Avi
APPLICANT: Baker Kevin P.
APPLICANT: Bottetain, David
APPLICANT: Desnoyers, Luc
APPLICANT: Eaton, Dan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                Fong, Sherman
Gao, Wei-Qiang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rumas, Daniel
                                                                          RESULT 15
US-09-999-833A-39$
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                            APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
PRIOR
PRIOR
PRIOR
```

998-04-22

998-04-2

```
R FILING DATE: 1998-05-15
R APPLICATION NUMBER: 60/085689
R FILING DATE: 1998-05-15
R APPLICATION NUMBER: 60/08559
R FILING DATE: 1998-05-15
R FILING DATE: 1998-05-15
R FILING DATE: 1998-05-15
R APPLICATION NUMBER: 60/085573
R FILING DATE: 1998-05-15
R APPLICATION NUMBER: 60/08573
R FILING DATE: 1998-05-15
R FILING DATE: 1998-05-15
R APPLICATION NUMBER: 60/085704
R FILING DATE: 1998-05-15
  PRIOR
```

9 -----QDLHCGACRALVDEL 38 12 WMFLL---LLGGAWAGHSRAQEDKVLGGHECQPHSQPWQAALFQGQQLLCGG--VLVGG- 65 Gaps 27; Indels 37; 15.0%; Score 66.5; DB 2; Length 260; 26.0%; Pred. No. 3; ive 10; Mismatches 27; Indels 3 66 NWVLTAAHCKKPKYTVRLGDHSLQNKDGPEQEIPVVQSIP 105 39 EWEIAQV----DPKKTIQMGSFRI-NPDGSQSVVEVTVTVP 74 6 WLALLIGALLGTAWARRS-Best Local Similarity 26.0 Matches 26; Conservative Query Match

음약장

ઠ

8, 2006, 20:58:25 Search completed: May Job time : 47 secs

THIS PAGE BLANK (USPTO)